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# THE OIL WEEKLY

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## The Oil Man's Calendar

| | |
|---|---|
| **MAY** | |
| **23-27** | **National Association of Purchasing Agents (Oil Company Buyers Group), Pittsburgh, Pa.** |
| **26-28** | **National Oil Well Superintendents Association, Fort Worth, Texas.** |
| **JUNE** | |
| **1-3** | **American Petroleum Institute, Mid-Year Meeting, Colorado Springs, Colorado.** |
| **5** | **San Joaquin Oil Men's Barbecue for California Oil Men, Bakersfield.** |
| **10-12** | **Pennsylvania Grade Crude Oil Association, Sailing from Buffalo, New York.** |
| **11** | **Interstate Oil Compact Commission, Santa Fe, New Mexico.** |
| **14-19** | **Second World Congress of Petroleum Paris, France.** |
| **17** | **National Stripper Well Association, Tulsa, Oklahoma.** |
| **20-26** | **Golden Celebration of Oil and Gas, Findlay, Ohio.** |
| **24-26** | **National Oil Scouts Association, Dallas, Texas.** |
| **JULY** | |
| | **Seventeenth International Geological Congress, Moscow, U.S.S.R.** |
| **SEPT.** | |
| **15-17** | **National Petroleum Association, Hotel Traymore, Atlantic City, New Jersey.** |
| **SEPT. 27 OCT. 1** | **American Gas Association, Cleveland, Ohio.** |
| **OCT.** | |
| **11-16** | **Oil World Exposition, Houston, Texas.** |
| **14-16** | **Independent Petroleum Association of America, Houston, Texas.** |
| **29-30** | **Mid-Continent Oil and Gas Association, Texas Division, Dallas, Texas.** |
| **NOV.** | |
| **9-12** | **American Petroleum Institute, (Annual), Chicago, Illinois.** |

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# LOOKING AHEAD

## WITH THE EDITOR

**Proper Care of Electric Motors Pay Dividends . . .**
**Rejuvenation of Austin Chalk properties . . .**

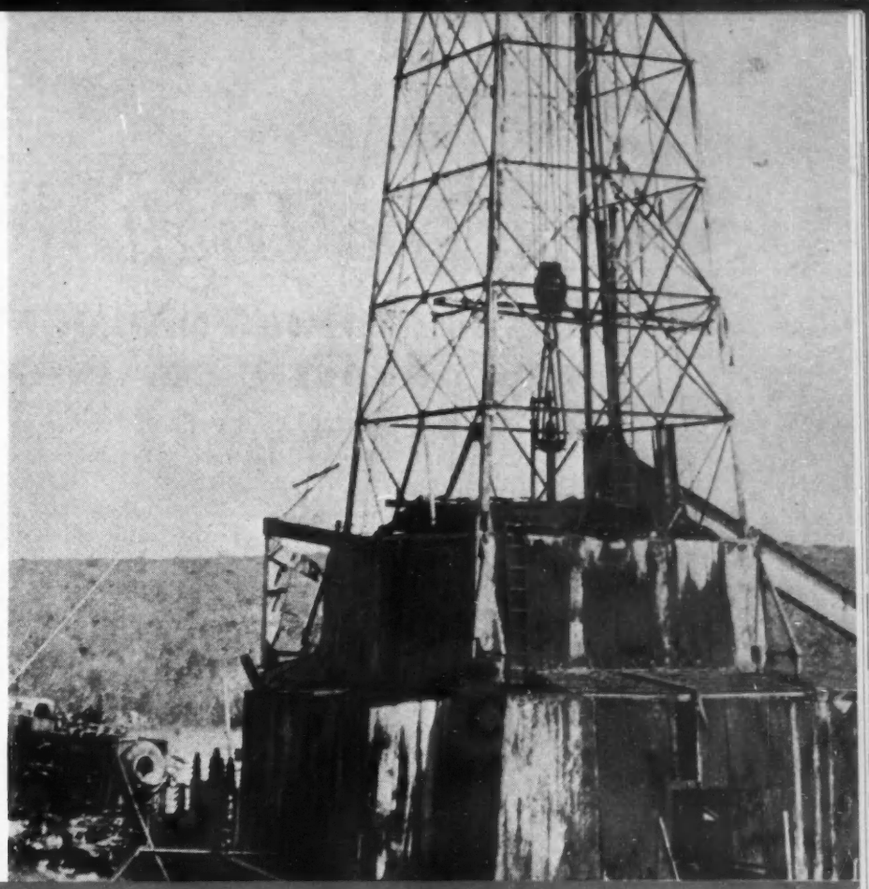
**ARE you obtaining long and trouble free service from your electric motors? It is necessary to take only a limited number of simple precautions to avoid subjecting the various parts of a motor to injurious treatment, but it is highly important that these be made. It is likely that the most serious damage to electric motors operating in the oil fields is caused by the failure of attendants to realize the importance of the few simple cares, or a lack of knowledge of what these are. In continuing its "Equipment Care Series" next week, The OIL WEEKLY will publish an article entitled "Hints for Maintenance of Electric Motors", which will set out in clear, concise form the necessary attention that should be given all electric motors.**

SUPPOSE the stripper well club discovered that much of the acreage held by its members could be reworked a little and that said members could, by employing a few new methods, change a dribble of oil to a heavy flow each day. From them would rise a chorus of hallelujahs loud enough to be heard in Madison Square Garden right after a popular champ had kayoed some unpopular contender. Earl Post tells in a chatty article to appear in an early issue what's happening to some rejuvenated chalk properties along the Balcones Fault.

THE present situation and its future course in East Texas is a subject of importance to the industry, and is to be discussed May 25 by the East Texas Chapter of the American Petroleum Institute.

# THIS WEEK

» ZAVALLA COUNTY'S FIRST OIL FIELD was discovered last week, and appears to be of gusher proportion. Indications are the well, Wilcox Oil & Gas Company's Gilliam 1, may be good for 5000 barrels. This new Edwards lime discovery is bottomed at 3947 feet, and is looked upon as being one of the most important discoveries in years for South Texas. The scene was taken when the flow was being killed. Page 69.



THE United States Bureau of Mines in its regular monthly forecast estimates that domestic demand for crude petroleum will reach the record-breaking level of 3,366,000 barrels daily during June, or 33,100 barrels higher than in May, and 359,800 barrels greater than a year ago. While the Bureau expects an increase, actual production recently has been in excess of this figure, averaging 3,494,000 barrels per day. During this period stocks increased over 6½ million barrels. **Page 11.**

TEXAS' crude production for June has been set at 1,350,262 barrels daily. This is 98,439 barrels less than the output now currently in effect, and is 4138 barrels lower than consumer demand estimated by the United States Bureau of Mines. The June figure is a reduction of approximately 12.5 percent, and was made because of the increase in crude stocks during recent weeks. **Page 10.**

RECOGNITION that continued mounting production is adding too much to crude oil storage was shown at the Texas state-wide hearing. The gravity of the situation was expressed by several sources, who touched upon several pertinent facts. Therefore, it was not surprising that the Texas Railroad Commission decided to cut output during June (see preceding paragraph). **Page 10.**

SO FAR this year, oil companies are showing profits comparable with those gained in the similar period of 1929. Moreover, most indications point to a continuation of favorable earnings, suggesting that profits for the whole year 1937 may equal those of 1929. The favorable earnings reflect the large volumes of business being handled by the industry. These figures represent sharp gains over 1936. **Page 13.**

## CURRENT SITUATION

***(Latest Available Weekly Data)***

**Outlook.** — Somewhat improved by prospects of better crude control in June.

**Crude Market.**—Stronger as strict allowables loom.

**Refined Oil Markets.** — Prices mostly the same as week ago.

**Crude Production.** — Still around record level.

**Crude Runs to Stills.**—Up 70,000 barrels daily; nearly duplicating all time peak of two weeks before.

**Crude Stocks.**—Up 2,512,000 barrels in week ended May 1; gain of 18,038,000 in 14 weeks.

**Gasoline Stocks.**—Down 1,091,000 barrels..

**Gas and Fuel Oil Stocks.**—Up further by 442,000 barrels.

**Drilling.**—Completions last week down one; total wells 549.

***See* MARKET SECTION *for Details***

PROMPT enactment of the Connally contraband oil oil act was made possible last week. The House rules committee granted a rule giving the measure preferential status. Indications are it may be brought to the floor on May 25. The present law expires June 30, and the new bill merely provides for its extension. The Senate voted to make it permanent, but the House is favoring extending it only two years. **Page 12.**

WITHOUT debate or formal vote, the House of Representatives last week eliminated from the Interior Department appropriation bill the provision prohibiting expenditure of any funds by the Bureau of Mines for making of petroleum demand forecasts. Leading members of the committee handling, disclaimed any responsibility for the proviso. **Page 12.**

THE ABUSE of sucker rods contributes heavily to the number of strings that fail to show more than a short service life, but with correct treatment they will meet all reasonable operating requirements. Trained crews, plus proper tools, well studies and strict rules for all handling have proved they can provide more efficent service than being obtained in many instances. **Page 16.**

A DRILLING test encountered temperatures so high that a destructive effect was had on many parts in contact with the mud column. The operators have overcome the difficulty in an economical manner. A mud cooling system was used to reduce and control the mud temperature. **Page 40.**

# *Stocks Too High*

## TEXAS HEARING HARMONIOUS WHEN DRASTIC CUT PLANNED

**Austin.**—Recognition that continued mounting production is adding too much crude oil to storage was in evidence at the Texas state-wide proration hearing here last week. Gravity of the situation was evidenced both by expressions of members of the Texas Railroad Commission and by the operators who for the first time at such a hearing, did not seek an increased allowable. Result of the hearing was an order reducing the allowable for June.

The commissioners pointed out that storage is increasing at the rate of 2,500,000 barrels a week. Late figures show 303,000,000 barrels of crude oil and 81,000,000 barrels of gasoline in storage. Crude oil storage, they said, had increased 15,000,000 barrels since the first of the year.

From these and other statements, it appeared that a reduction in United States production of 200,000 barrels daily during June is necessary if production and demand are kept in balance. Members of the commission indicated clearly that it was their purpose to keep Texas in line, since Texas produced 40 percent of the oil.

Consumer demand for Texas crude during June as estimated by the United State Bureau of Mines showed an increase of 13,600 barrels above the May estimate. This brought the total bureau figure to 1,354,800 barrels per day.

### Nominations Increased

Nominations filed with the Railroad Commission by purchasers of Texas crude oil totaled 1,645,825 barrels. This was 291,025 barrels above the estimate of the Bureau of Mines, and an increase of 13,988 barrels above May nominations.

The total Texas allowable on May 15 was 1,448,701 barrels, a gain of 36,670 barrels above the allowance fixed on May 1, and 94,301 barrels above the estimate of Texas consumer demand during June, as calculated by the Bureau of Mines.

Commission figures showed that from May 1 to May 15 491 new wells were completed in Texas. From January 1 to April 1, 3,342 new wells producing oil have been completed. Thus, new completions are being brought in at the rate of 10,000 per year.

The necessity for a reduction was reflected in the attitude of operators present, most of whom asked that May allowable be continued instead of asking for the increases normally sought at each hearing.

The old question of well spacing was again discussed at this hearing as a result of a request for an increase in the allowable for the Yates field.

### Well Spacing Discussed

R. E. Hardwicke offered a report which he and other attorneys and engineers had prepared for the Independent Petroleum Association. Hardwicke declared that after long study of the law and the engineering problems involved, he had come to the conclusion that there is nothing in the statute to prevent the commission from considering economic waste in the preparation of any order. A specific prohibition against the consideration of this phase of waste which was in the early statutes has now been withdrawn, he said.

"But," he declared, "if we assume that the commission can consider physical waste alone, then we must recall that the courts have held that limitation of production to market demand is a legal method of preventing physical waste.

"While it is obvious that the commission may prevent close spacing because of blowout or fire hazard, it may go further and require relatively uniform spacing to provide for uniform withdrawals which the engineers have agreed are best.

"Part of the trouble comes from the method of distribution of the allowable where spacing is not uniform, especially where there are small or densely drilled tracts. Leaving aside any spacing regulations for fire hazards, blowouts, and the like, or assuming that there be no spacing rules, each operator drilling as he pleases, the commission is still confronted with he problem of distribution of allowable. The method used has a great deal to do with the necessity or the urge to drill unnecessary wells. By a proper method of distribution, the urge or desire to drill to a low density does not exist.

"To effect such a purpose the commission may first determine the effective drainage area of wells in a particular field. If the commission finds that one well will drain 10 acres effectively, then it may not, either directly or indirectly, require an operator to drill more. In the Consolidated Gas Case recently decided by the U. S. Supreme Court, the court found that the commission may not permit non-compensated drainage between leases. Such an order is void. The commission may, on the other hand, shut in a well entirely, thus confiscating the property of an operator, if it finds that it is reasonably necessary to prevent physical waste in a field."

Hardwicke pointed out that the commission might easily force the drilling of the so-called unnecessary wells he described by fixing allowables on the straight per-well basis, or giving too much weight to the potential factor. He said that the Texas Supreme Court, in the Brown case, had specifically held that it is the duty of the commission to adjust allowables downward in assigning allowables to wells on very small tracts, or otherwise to prevent discrimination.

"But the commission did not accept the Brown case," declared Commissioner Thompson.

Hardwicke replied, "That's what I'm complaining about."

Thompson then said, "The explanatory opinions written subsequently did not sustain the interpretation you put on the case. How can the commission determine such allowables with 11 variables? They gave Einstein the Nobel

[*Continued on page 95*]

# *Texas June Allowable Down 98,439 Barrels*

**Austin.—Texas crude oil production for June will be 1,350,262 barrels daily. This figure was set by the Texas Railroad Commission on May 19, following a state-wide hearing.**

**The June figure is 98,439 barrels less than the output allowed by the current order, and is 4,138 barrels below consumer demand for June as estimated by the United States Bureau of Mines.**

**The June figure represents a reduction of approximately 12.5 percent in production, and is distributed among all districts except the East Texas field. In the latter the allowable of 2.32 percent of potential is continued for June.**

**June allowable by districts (in barrels daily) is as follows:**

| | | | |
|---|---|---|---|
| Southwest | 213,667 down 22,594 | West Central | 65,460 down 2,443 |
| Gulf Coast | 186,275 down 24,903 | West | 172,492 down 21,238 |
| East Central | 76,269 down 7,928 | North | 61,000 down 7,012 |
| East Texas | 462,000 up 1,063 | Panhandle | 78,031 down 5,786 |
| Rodessa | 35,068 down 7,598 | All districts | 1,350,262 down 98,439 |

# *See Peak in June*

## DEMAND EXPECTED TO REACH RECORD LEVELS

**Washington, D. C.**—Domestic demand for crude petroleum will reach the record-breaking level of 3,366,000 barrels per day during June, it was predicted by the United States Bureau of Mines May 21 in its monthly forecast.

The June requirement will be 33,100 barrels higher than the daily average estimated for May and 359,800 barrels above the June, 1936, actual production.

### Estimate Is of Demand

The Bureau's estimate, it should be noted, is of demand. Actual production has been much in excess of that figure, averaging about 3,494,000 barrels daily during the five weeks ended May 8, pointed out by the bureau to be "The highest sustained rate ever recorded." However, during that period, stocks of crude increased 6,774,000 barrels, of which 6,503,000 barrels was in domestic grades. Consequently, the daily demand for domestic crude in the five-week period was 3,308,000 barrels. The bureau's estimate for that period was 3,264,000 barrels, a difference of only 44,000 barrels.

### Motor Fuel to Be Used Too

The report estimates the June domestic demand for motor fuel at 48,500,000 barrels, or nine percent higher than the actual demand of June, 1936.

Exports of motor fuel for the month are placed at 2,600,000 barrels, 200,000 barrels under the May figure.

"Stocks of finished and unfinished gasoline amounted to 81,651,000 barrels on March 31, 1937," it was explained. "According to the American Petroleum Institute, these stocks were reduced by about 135,000 barrels during April, which would place stocks as of April 30 approximately 8,000,000 barrels higher than for the same date in 1936. However, this accumulation in stocks is roughly proportional to the increase in consumption, and the estimated withdrawal from gasoline stocks in June, 1937, 3,950,000 barrels, is essentially unchanged from the estimate of June, 1936."

With benzol and "direct" sales and losses of natural gasoline estimated at 1,050,000 barrels, the estimated production of gasoline for June will be 46,100,000 barrels, which the bureau recommends be distributed among the districts, in barrels as follows:

East Coast, 6,780,000; Appalachian, 1,690,000; Indiana-Illinois, 8,000,000; Oklahoma, 3,080,000; Kansas-Missouri, 2,990,000; Inland Texas, 3,700,000; Gulf Texas, 10,190,000; Gulf Louisiana, 1,570,000; Inland Louisiana - Arkansas, 950,000; Rocky Mountain, 1,090,000; California, 6,060,000.

Natural gasoline consumption at refineries is estimated at 5.4 percent of the total gasoline required, or 2,490,000 barrels; the yield of straight-run and cracked gasoline is estimated at 45.46 percent which, applied to the estimated straight-run and cracked production of 43,610,000 barrels, gives 95,930,000 barrels as the crude required at refineries.

### Foreign Runs Down

Runs to stills of foreign crude are estimated at 2,600,000 barrels, 300,000 less than estimated for May; exports of crude are placed at 4,650,000 barrels, 150,000 barrels more than for May, and fuel and losses are expected to be 3,000,000 barrels, 100,000 barrels under the May figure. Application of these factors gives the required daily production of crude for the coming month as 3,366,000 barrels, the state allocation recommendations being as follows: Texas, 1,354,000 against 1,340,800 forecast for May; Oklahoma, 625,300 against 622,700; California, 585,900 against 583,300; Louisiana, 252,000 against 249,400; Kansas, 190,700 against 187,100; New Mexico, 102,000 against 99,800; Pennsylvania, 52,400 against 52,600; Wyoming, 51,000 against 49,000; Michigan, 38,400 against 34,900; Arkansas, 28,300 against 28,500; Kentucky, 15,700 against 14,800; Montana, 15,400 against 14,200; New York, 14,700 against 14,500; Illinois, 12,800 against 12,500; West Virginia, 9,700 against 10,500; Ohio, 10,600 against 10,300; Colorado, 4,800 (unchanged); Indiana, 2,300 against 2,200.

## REMOVAL HEARING

### Kennerly will not rule on Carlisle till June

**Houston.**—It probably will be some time in June before Federal District Judge T. M. Kennerly rules on whether O. H. Carlisle, executive of Gulf Oil Corporation in Houston, will be committed or whether he will be excused from going to Madison, Wisconsin, to face conspiracy charges along with 50 other individuals and 25 corporations.

The indictment of Carlisle, characterized recently by United States Commissioner W. F. Carothers after the preliminary hearing before him as groundless, was merely part of the general Madison grand jury indictment, made at the instigation of the United States department of justice, in which the oil companies were accused of conspiring to raise the wholesale and retail in 10 mid-western states, of which Wisconsin is one.

## OFFER PAY RAISE . . .

### Mexican labor's threat of strike May 27 still exists

Press dispatches from Mexico City May 20 said oil companies had offered employees blanket wage scale increases which would involve an addition of 8,000,000 pesos to operating expenses. The offer was made to avert a general strike threatened by the Syndicate of Petroleum Workers for May 27.

About 18,000 workers, temporary and permanent, would benefit by the pay increase, it was stated, "meanwhile the threat of a strike May 27, if a contract is not drawn, still had not been withdrawn."

## Oil Business Is A Tiring One

**The two individuals sprawled out in deck chairs aboard the Grace Line boat "Santa Elena" apparently have tired of the many conferences held on the producing situation, and have decided on a rest cure. They are Ralph J. Pryor (left) and Floyd Lockhart of the firm of Slick, Pryor & Lockhart of Witchita, Kansas.**

# To Enact Early

## WAY CLEARED FOR CONNALLY BILL TO GO TO THE FLOOR

**Washington.**—Prompt enactment of the Connally-Dies bill extending the operation of the Connally contraband oil act was made possible this week by the House rules committee which, at the request of Representative Cole of Maryland, chairman of the oil group of the House interstate and foreign commerce committee, granted a rule giving the measure preferential status on the House calendar.

Following consideration of the matter on May 18, the rules committee approved a rule providing for one hour's debate by the House on the rule itself and, if accepted, two hours debate on the bill. Indications were that the rule and bill would be brought up on the floor on May 25.

### Report Made Public

The committee this week made public its report recommending extension of the act until June 30, 1939, explaining that it determined upon this period rather than the permanent extension approved by the Senate because state regulation is in a transitory period, the present Texas law is temporary, and changes may occur in the situation during the next two years which might make a change in the legislation advisory.

Outlining the situation following the invalidation of the NRA oil provisions, which led to adoption of the Connally act, the committee pointed out in its report that while the operation of the law has been of material benefit to the independent refiners and independent retailers, "evidence presented to the committee indicates that its principal merit lies in the support which it gives to the state oil and gas conservation laws." A noteworthy example of this support, it was pointed out, is the aid given state control in the East Texas field which will greatly increase the amount of oil recovered from that pool.

"The operation of the existing law has had the further desirable effect of permitting the federal government, through the agency established by the President under the law to keep in constant touch with the petroleum industry in a more intimate way than would otherwise be the case," the report stated. "We regard this as extremely important in view of the fact that the production of oil has increased in the last 3 years approximately 40 percent, and yet new discoveries have not increased our known reserves over that of 3 years ago to the point that would justify such a large increase in production. In other words if, as some feel, the reserves of petroleum said to exist 3 years ago would be exhausted in approximately 15 years to meet the demand at that time, then with the large increase in demand at this time without a corresponding addition to our reserves, the concern of the states enjoying the possession of this resource and the policy of production pursued by them becomes a concern of the national government also."

### Reasons for Temporary Extension

In recommending only temporary extension of the law, the committee went into detail regarding its "numerous reasons" for such action.

"While the law is in aid of all states having conservation statutes," it was explained, "it has functioned solely in East Texas and the large resources of that state make the statutes of the state of Texas of principal concern. The Texas conservation law is temporary and expires September 1, 1939. It was testified in the hearings by a former chairman who represented the railroad commission of Texas in the hearings, that if this law was not extended the problem could be handled by the state. The committee doubts the entire accuracy of this statement, but is strongly of the opinion that the commendable improvement which has taken place in the East Texas field in the past 3 years and the higher respect for the proration orders of the state commission, evidenced by the scarcity of excess production, might result at a later date in such a statement being justified.

"The present law has been criticized by some independent jobbers who claim that it has curtailed production and created a monopoly resulting in price fixing and the establishment of margins too low for the little independent jobber to operate. It was admitted, however, in the hearings by those taking this position that litigation now pending in which violations of the anti-trust law is the basis, because of price-fixing tactics, was encouraged and supported by their group and covered to their mind the objections which they presented to this bill. In other words, the amendments suggested by them were not germane to his legislation and were really violation of other law. Without commenting on this litigation we feel that the determination of that case is important before this law is made permanent. The interstate oil compact pledges the states as parties thereto to the enactment of sound conservation and waste-prevention statutes. This compact expires September 1, 1937. The committee believes this presents an additional reason for the present law not being made permanent."

While the committee thus disposed of the recommendations of the marketers for legislation requiring the disintegration of the producer-refiner-marketer companies, it offered no comment on the suggestion of Harvey P. Fremming, head of the oil workers' union, for a 36-hour week and $5 a day minimum wage.

### Administration Expense Leaves Profit

The report went into some detail regarding the cost of administration of the Connally act, pointing out that excise taxes on production and refining imposed originally for the purpose of covering the cost of petroleum administration, amounting to $1,237,000 during the fiscal year ended June 30, last, and for the 9 months ended with March, 1937 collections totaled 647,000.

"This revenue must in fairness be claimed by the board administering the law before us," it was declared. "It is to the credit of the Interior Department to be able to state that instead of asking Congress for the entire amount so collected they have expended less than $300,000 a year for the total expense of carrying out the provisions of the present law. In other words, the revenue derived from existing taxes for the purposes of the present law amounts to over four times the sum expended, so that from an expense standpoint it is a profitable venture for the government. We have little doubt that should this law not be extended there would be a request for the repeal of the present excise tax of one twenty fifth of a cent on produced and also on oil refined."

"It is strongly felt that the present law should not be made permanent at this time," the report concluded.

## ELIMINATE BAN

### House cuts out provision banning Bureau report

**Washington, D. C.**—Without debate or formal vote, the House of Representatives on May 17 eliminated from the Interior Department apropriation bill the proviso prohibiting the expenditure of any funds by the Bureau of Mines for the making of forecasts of demand for petroleum. The House's action was taken on motion of Representative Johnson of Oklahoma, chairman of the appropriations subcommittee in charge of the bill.

The ban on the issuance of the monthly forecasts after the close of the current fiscal year, June 30, next, was written into the bill by the appropriations committee, after Paul Hadlick of the National Oil Marketers' Association testified during hearings on the measure that the forecasts were a link in a chain of circumstances which enabled the integrated oil companies to exercise monopolistic control over the industry. Other links in the chain, he said, were the Connally contraband oil act, the interstate compact and the state proration laws.

### Disclaim Responsibility

Leading members of the appropriations subcommittee disclaimed any responsibility for the proviso, and several were unaware of its existence until newspaper men called it to their attention. When the Bureau of Mines appropriation was reached by the House, leaders were prepared to make a strong attack on the prohibition if any effort was made to retain it in the bill, but no voice was raised in support of the clause and it was quickly eliminated.

# *Profits Are Running At 1929 Levels*

BY L. J. LOGAN, Associate Editor

**For first half of 1937, oil companies are virtually assured earnings comparable with those in similar period of 1929.**

**Similarly favorable results are promised, for the latter half of this year, with large business volumes and good prices in prospect.**

OIL companies this year are showing up as over-pessimistic those who despaired in the recent depression and said, "We may never again duplicate the great business activity and large profits of 1929."

So far this year, oil companies have been showing profits comparable with those gained in the similar period of 1929.

Furthermore, most of the indications point to a continuation of favorable earnings, suggesting that profits for the whole year 1937 will be closely comparable with those for 1929.

### Results Like in 1929

It is virtually assured that at least for the first half of the year, 1937 will be another 1929. The profits of oil companies in the first quarter of this year closely conformed with those in the similar period of 1929; and the second quarter of this year, over half gone, is proving similarly profitable.

Moreover, there is not in prospect, at present, any serious interruption of the favorable earning trends of the first five months of the year. Volumes of business very likely will continue large, and prices promise to hold at least around the present levels.

### Business Volumes Large

The favorable earnings that the oil companies are showing reflect particularly the large volumes of business they are doing. The demand for petroleum is running higher this year than ever before in the history of the industry. In supplying the unprecedented demand, oil companies are producing more crude oil than they ever did before. The pipe line companies consequently are handling record volumes of oil. Similarly, refineries are processing more crude and turning out more products than they ever did before. And marketing departments and companies are surpassing all previous records in sales.

For all branches of the industry, the all-time record oil consumption is affording record volumes of business. And the heavy business volumes naturally tend to make possible better margins of profit over the operating costs.

Thus the large volumes of business are making it possible for the oil companies to show profits comparable with those of 1929, even though prices of crude and the refined products are substantially lower than in 1929.

### Prices Are Favorable

Nevertheless, the prices that have prevailed this year have been comparatively favorable. They have been around 10 percent better than in the similar period last year. This better level of prices has contributed materially to the circumstance that oil company earnings in 1937 have been running much higher than in 1936. In addition, of course, the improved earnings for this year reflect the fact that the volumes of business have been running substantially higher than in 1936.

### Sharp Gains Over Last Year

Stimulated by the two important advantages, larger volumes of business and improved prices, the earnings of the oil companies in the first quarter of this year were in many cases more than double those in the similar period last year. For the industry as a whole, the improvement apparently was well above 50 percent.

Since some of the larger oil com-

**First Quarter Earnings of 1937 and 1936, for 26 Oil Companies**

**Profit after all deductions, including interest, depreciation, depletion, amortization, federal taxes, minority interest, etc.**

| COMPANY | First Three Months 1936 | 1937 |
|---|---|---|
| Amerada Corp. | $ 473,996 | $ 517,116 |
| Atlantic Refining Co. | 1,983,000 | 1,993,000 |
| Barnsdall Corp. | 471,043 | 591,155 |
| Continental Oil Co. | 2,114,521 | 3,691,193 |
| Derby Oil & Refining Co. | 38,426 | *140,584 |
| Houston Oil Co. and Houston Pipe Line Co. | 134,925 | 469,366 |
| Louisiana Land & Exploration Co. | 411,200 | 540,600 |
| Mid-Continent Petroleum Corp. | 942,659 | 1,233,025 |
| Mission Corp. | 267,790 | †1,395,878 |
| Ohio Oil Co. | *2,255,139 | 3,471,629 |
| Pacific Western Oil Co. | 323,506 | 269,007 |
| Panhandle Producing & Refining Co. | 30,430 | 36,343 |
| Paraffine Companies, Inc. | 381,551 | 541,722 |
| Phillips Petroleum Co. | 3,156,159 | 5,615,634 |
| Plymouth Oil Co. | 361,156 | 640,319 |
| Quaker State Oil Refining Corp. | 163,752 | 387,737 |
| Seaboard Oil Co. | 612,126 | 591,365 |
| Shell Union Oil Corp. | 1,681,984 | 3,679,479 |
| Skelly Oil Co. | 797,015 | 1,534,413 |
| Standard Oil Co. of Cal. | 2,952,958 | 7,889,489 |
| Sunray Oil Corp. | 136,749 | 274,846 |
| Superior Oil Corp. | 63,438 | 42,167 |
| The Texas Corp. | 5,842,897 | ‡10,800,000 |
| Texas Pacific Coal & Oil Co. | 138,500 | 220,500 |
| Tide Water Associated Oil Co. | 2,707,702 | 3,328,303 |
| Union Oil Co., of Cal. | 400,000 | 2,200,000 |
| Total for 26 Companies. | 28,842,622 | 52,094,870 |

* Before Federal Taxes.
† Includes non-recurring profit of $1,249,234 from sale to Revada, Inc., of 250,000 shares of common stock of Tide Water Associated Oil Company at $14.30 a share, or $3,575,000, under an exercised option.
‡ Estimated.

## Net Earnings of 19 Oil Companies in First Quarter for Past 5 Years

**Profit after all deductions, including interest, depreciation, depletion, amortization, federal taxes, minority interest, etc.**

| COMPANY | NET PROFIT IN FIRST THREE MONTHS | | | | | Combined Net Profit for Five First Quarters |
|---|---|---|---|---|---|---|
| | 1933 | 1934 | 1935 | 1936 | 1937 | |
| Amerada Corporation | $ *201,939 | $ 524,999 | $ 399,310 | $ 473,996 | $ 517,116 | $ 1,713,482 |
| Atlantic Refining Company | *3,127,000 | 613,000 | *129,000 | 1,983,000 | 1,993,000 | 1,333,000 |
| †Barnsdall Oil Company and Predecessor | *852,803 | ‡119,368 | *337,839 | 471,043 | 591,155 | *9,076 |
| Continental Oil Company | *2,825,247 | 1,211,483 | 940,807 | 2,114,521 | 3,691,193 | 5,132,757 |
| Houston Oil Company and Houston Pipe Line Company | *355,294 | 175,607 | 122,083 | 134,925 | 469,366 | 546,687 |
| Mid-Continent Petroleum Corporation | *1,469,928 | 310,031 | *273,057 | 942,659 | 1,233,025 | 742,730 |
| Ohio Oil Company | *1,418,245 | 1,416,176 | 622,150 | ‡2,255,139 | 3,471,629 | 6,346,849 |
| Pacific Western Oil Corporation | *1,042 | 202,090 | 154,281 | 323,506 | 269,007 | 947,842 |
| Panhandle Producing and Refining Company | *118,443 | *47,014 | *38,056 | 30,430 | 36,343 | *136,740 |
| Phillips Petroleum Company | *2,179,621 | 726,125 | 1,542,335 | 3,156,159 | 5,615,634 | 8,860,632 |
| Plymouth Oil Company | 7,787 | 210,314 | 185,833 | 361,156 | 640,319 | 1,405,409 |
| ⁋Seaboard Oil Company | 290,809 | 368,219 | 439,177 | 612,126 | 591,365 | 2,301,696 |
| Shell Union Oil Corporation | *9,239,550 | *41,092 | *1,121,041 | 1,681,984 | 3,679,479 | *5,040,220 |
| Skelly Oil Company | *1,282,679 | *146,655 | 297,517 | 797,015 | 1,534,413 | 1,199,611 |
| Standard Oil Company of California | *718,987 | 3,318,591 | 4,891,022 | 2,952,958 | 7,889,489 | 18,333,073 |
| Superior Oil Corporation | *137,039 | ‡74,594 | ‡81,561 | 63,438 | 42,167 | 124,721 |
| Texas Pacific Coal and Oil Company | *252,983 | *39,566 | *55,806 | 138,500 | 220,500 | 10,645 |
| Tide Water Associated Oil Company | *1,238,728 | 1,430,962 | 1,220,991 | 2,707,702 | 3,328,303 | 7,449,230 |
| Union Oil Company of California | *1,100,000 | 500,000 | 1,350,000 | 400,000 | 2,200,000 | 3,350,000 |
| Total for 19 Companies | *26,220,932 | 10,927,232 | 10,292,268 | 21,600,257 | 38,013,503 | 54,612,328 |

* Loss.

† Barnsdall Corporation's refining and marketing properties were segregated from the producing properties May 31, 1935; Barnsdall Corporation becoming strictly a producing concern; and Barnsdall Refining Corporation being formed to take over refining and marketing; Barnsdall Corporation then was merged with Barnsdall Oil Company and its name was changed to Barnsdall Oil Company, effective March 31, 1936.

‡ Including $200,000 profit on sale of 7 percent interest in Great Lakes Pipe Line Company.

⁋ Name of Company changed in May, 1931, from Mexican Seaboard Oil Company to Seaboard Oil Company.

‡ Before Federal Taxes.

panies do not issue quarterly financial reports, it is not possible to present figures showing exactly how this year's earnings compare with those of earlier years. And the figures that are available are not accurately representative of the results for the industry as a whole.

If the results of the larger companies not included were available, they probably would pull down the percentage of improvement over last year indicated for the 26 companies whose results are shown in an accompanying table. For those 26 companies include a large proportion of strictly producing concerns, and as a rule, profits have been better for the producing units than for the integrated companies or for those engaged primarily in refining or marketing.

### Earnings Up 80 Percent

The 26 companies included in the accompanying table showed for the first three months of this year an aggregate profit 80.6 percent larger than that of the similar period last year. In the first quarter of 1937 they had a combined net profit of $52,094,870, compared with $28,842,622 for the corresponding period of 1936. Except in a few instances, the figures shown represent profit after all deductions, including interest, depreciation, depletion, amortization, federal taxes, minority interest, etc.

The sharp improvement in earnings indicated for these 26 companies is especially impressive in the light of the fact that even 1936 afforded generally profitable operations. Without a single exception, the 26 companies showed some profit in the first three months of 1936. Yet nearly all showed better results in the first three months of

## First Quarter Net Earnings of 10 Oil Companies from 1929 to 1937

**Profit after all deductions, including interest, depreciation, depletion, amortization, federal taxes, minority interest, etc.**

| First Three Months of: | Amerada Corporation | Atlantic Refining Company | †Barnsdall Oil Company and Predecessor | Houston Oil Company and Houston Pipe Line Company | Mid-Continent Petroleum Corporation | Panhandle Producing &Refining Company | Phillips Petroleum Company | Skelly Oil Company | Tide Water Associated Oil Company | Union Oil Company of California | Total for 10 Companies |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1929 | $ 50,762 | $ 3,892,600 | $ 1,888,372 | $ 345,147 | $‡2,120,991 | $ 32,919 | $ ⁋3,612,879 | $ 1,170,208 | $ 1,613,671 | $ 2,600,000 | $ 17,327,549 |
| 1930 | *76,585 | 1,124,300 | 1,420,595 | 523,249 | 1,013,279 | 37,225 | 1,604,844 | 547,510 | 2,165,387 | 2,600,000 | 10,959,804 |
| 1931 | 58,225 | *2,162,000 | 1,658 | 228,703 | *828,623 | *126,557 | *619,351 | *776,345 | *191,575 | 1,800,000 | *2,615,865 |
| 1932 | 225,383 | 435,000 | *390,125 | 20,146 | *1,035,738 | *148,175 | *2,136,922 | *278,628 | 527,602 | 950,000 | *1,831,457 |
| 1933 | *201,939 | *3,127,000 | *852,803 | *355,294 | *1,469,928 | *118,443 | *2,179,621 | *1,282,679 | *1,238,728 | *1,100,000 | *11,926,435 |
| 1934 | 524,999 | 613,000 | ‡119,368 | 175,607 | 310,031 | *47,014 | 726,125 | *146,655 | 1,430,962 | 500,000 | 4,206,423 |
| 1935 | 399,310 | *129,000 | *337,839 | 122,083 | *273,057 | *38,056 | 1,542,335 | 297,517 | 1,220,991 | 1,350,000 | 4,154,284 |
| 1936 | 473,996 | 1,983,000 | 471,043 | 134,925 | 942,659 | 30,430 | 3,156,159 | 797,015 | 2,707,702 | 400,000 | 11,096,929 |
| 1937 | 517,116 | 1,993,000 | 591,155 | 469,366 | 1,233,025 | 36,343 | 5,615,634 | 1,534,413 | 3,328,303 | 2,200,000 | 17,518,355 |
| Total for 9 years | 1,971,267 | 4,622,900 | 2,911,424 | 1,663,932 | 2,012,639 | *341,328 | 11,322,082 | 1,862,356 | 11,564,315 | 11,300,000 | 48,889,587 |

* Loss.

† Barnsdall Corporation's refining and marketing properties were segregated from the producing properties May 31, 1935; Barnsdall Corporation becoming strictly a producing concern; and Barnsdall Refining Corporation being formed to take over the refining and marketing; Barnsdall Corporation then was merged with Barnsdall Oil Company and its name was changed to Barnsdall Oil Company, effective March 31, 1936.

‡ Including $200,000 profit on sale of 7 percent interest in Great Lakes Pipe Line Company.

‡ After charges, surrendered leaseholds, but before depreciation, depletion and federal taxes.

⁋ Prior to 1930 company showed net income after expenses and federal taxes, but before depreciation, depletion and amortization, for 1930 and later, figures are after all deductions.

1937, only 3 out of the 26 reporting smaller first quarter profit for this year than for last year.

Although some of the companies in the group of 26 showed only slightly higher first quarter profit this year than last year, half of them showed improvement of approximately 100 percent or better.

### Steady Recovery Indicated

The steady improvement in earning power of the oil industry since the later stages of the depression is indicated in the accompanying table showing first-quarter results of 19 oil companies from 1933 to 1937.

In the first three months of 1933, only 2 of the 19 companies reported any profit, while 17 showed losses. In that period, petroleum consumption had not yet entered upon the remarkable expansion that it subsequently has shown; and the industry still was having difficulties in controlling production, and hot oil was keeping the markets depressed. The 19 companies in the aggregate showed a net loss of $26,220,932 on operations in the first quarter of 1933.

In the first quarter of 1934 a decidedly better situation prevailed. All but 4 of the 19 companies had emerged to a profitable basis, and the whole group in the aggregate showed net profit of $10,927,232, against the large loss of the first quarter of 1933.

On the whole, the first quarter of 1935 brought results about the same as in the first quarter of 1934, aggregate profit of the 19 companies having been about the same. However, the companies showing losses numbered 6, compared with the 4 in the similar period the year before.

### Conditions Became Favorable

Conditions then grew more favorable, as oil consumption continued to climb, while balancing of production with demand became more effective, and more stable markets brought better prices. In the first three months of 1936, consequently, all of the 19 companies operated profitably, showing a combined net income of $21,600,257, or about twice as much as in the similar period of either of the two preceding years.

As indicated previously, the oil company earnings in this year's first quarter were sharply higher than in the similar period of 1936.

The 19 companies that showed a profit of $21,600,257 in the 1936 initial quarter reported combined net profit of $38,013,503 for the similar period of 1937, an improvement of 76 percent.

### Profits Back to 1929 Level

To show how the earnings in this year's first quarter compare with those in the similar period all the way back through 1929, a table is presented herewith on the results for 10 companies, on which figures are available. Incidentally, the group of 10 is fairly representative of the industry, as it includes several important companies that operate in all branches of the industry.

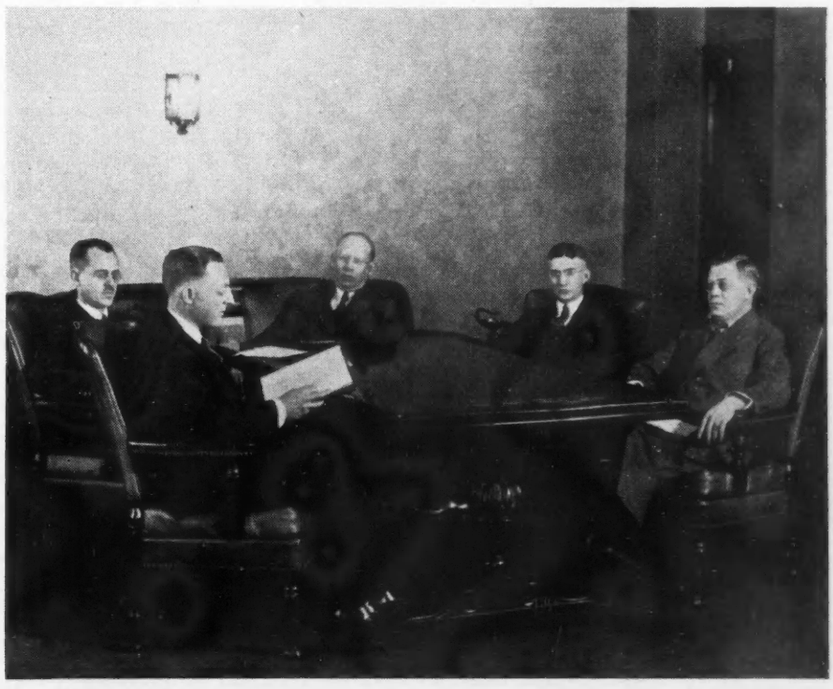
This group of 10 companies showed in the first quarter of 1937 a combined net profit of $17,518,355, or a little more than the profit of $17,327,549 earned in the initial three months of 1929.

This group's combined profit of $17,518,355 in the first quarter of 1937 was 58 percent greater than the $11,096,929 they earned in the similar period of 1936. The 10 companies in the opening three months of earlier years showed: profit of $4,154,284 in 1935, profit of $4,206,423 in 1934, loss of $11,926,435 in 1933, loss of $1,831,457 in 1932, loss of $2,615,865 in 1931, profit of $10,959,804 in 1930, and the previously mentioned profit of $17,327,549 in 1929.

## Findlay to Hold Golden Anniversary Celebration of Discovery of Oil in District

**Fifty years ago this coming June, the eyes of the world centered on Findlay, Ohio, where a large supply of natural gas had been encountered. For several years free gas was offered to factories locating in the city. However, the supply soon exhausted. This year, Findlay will stage its Golden Celebration of oil and gas in memory of the celebration held in 1887. The affair is under the direction of O. D. Donnell, president of The Ohio Oil Company, and he has as associates the business, industrial and professional leaders of the city. The photograph shows a meeting of the executive committee of the Findlay Oil and Gas Golden Celebration.**

**Left to right, around the table are: W. F. Thomas, secretary; C. T. Jackson, first vice president; O. D. Donnell, president; R. L. Heminger, second vice president, and J. W. Leatherman, treasurer. According to present plans, the entire week of June 20th will constitute the celebration period. During this time a monument at the discovery well is to be dedicated.**



# Sucker Rod Life By Elimination

THE abuse of sucker rods is a contributing factor in the failure of many strings that show a short service life. Rods are subjected to all types of treatment, and because of their small diameter and flexible nature are susceptible to severe shock and strain. Size is against sucker rods, but with correct treatment they will meet all reasonable operating requirements for which they are manufactured.

The sucker rod string is the power transmission line between the surface prime mover and the submerged pump. The transfer of this power by vertical motion places a severe strain on the transmitting medium which in many cases is required to function under extremely difficult conditions. Failures of rod strings have been traced to various abuses that were entirely out of line with adult intelligence.

About 40 different kinds of sucker rods now are on the market, each type manufactured for various conditions of usage. Sucker rod manufacturers have expended considerable effort in research and field experiments to determine actual field requirements. This effort should be met by a corresponding cooperative effort by the users of sucker rods, not only by becoming familiar with the specifications and performance of the rods, but with their own particular field problems. It is therefore important to be familiar with the particular field conditions that the rod must meet, and to use this means in making an intelligent purchase of rods.

**THIS is the second of a series of articles dealing with the care and maintenance of equipment. The total of 26 articles which will appear in The OIL WEEKLY during the next several months will cover most of the important equipment used in drilling, production and pipe line work.**

**"The OIL WEEKLY certainly is hitting the bull's eye with some very practical articles," writes an operator who has seen some of the series. "I can't imagine a subject of greater importance."**

**We realize, that, despite the work, investigation and co-operation going into this series, there will be points which may be missed. The pages of The OIL WEEKLY are open for discussion of this problem, which is costing the oil industry annually millions of dollars.—Editor.**

### Many Kinds of Abuse

It is difficult to classify sucker rod abuses in less than four or five groups. Neither manufacturers nor oil companies agree on either the number of groups or the relative importance of each group. Abuse is abuse, however, and regardless of the group in which a particular abuse belongs, the sucker rod suffers from the mistreatment and fails to deliver its full service life as a direct result. One sucker rod manufacturer places sucker rod abuses in the following general groups:

1. Material selection abuses.
2. Field handling abuses.
3. Installation abuses.
4. Mechanical operating abuses.

The breakdown in each group would include a large list of abuses. A large oil company divides sucker rod abuses into the four following phases of operation:

1. Transportation.
2. Running and pulling.
3. Pumping.
4. Storage.

Sucker rods of today are manufactured from a number of steels and alloys that meet a variety of pumping conditions. These steels are selected because of particular qualities that meet or most nearly meet certain operating conditions, and misapplication is an expensive abuse. It is a serious mistake to expect satisfactory results in pumping a very corrosive lease with sucker rods designed for light, non-corrosive pumping conditions. Sucker rod manufacturers furnish specifications of their products, and rods are specified as designed for certain types of conditions. Their qualities are expressed in physical and chemical specifications, and endurance limits shown.

Recently a Kansas oil producer experienced a costly sucker rod failure, which was due to use of improper

# *Prolonged of Abuses*

**Abuse is taking the life out of a large percentage of the sucker rod strings, but may be overcome by following certain practices. Mistreatment occurs at many points, during transportation, storage, running and pulling, and in pumping operations. Trained crews, plus proper tools, well studies and strict rules for all handling can definitely provide more efficient service than being obtained in many instances.**

By BRAD MILLS Associate Editor

rods. The foreman in charge contended that the rods were of poor quality, but the manufacturer refused to make an adjustment. Another manufacturer's rod of similar quality was run and used, with the result that failures again started in 10 days, and occurred every 48 hours thereafter. The matter finally came to the superintendent's attention, and a study disclosed that the trouble had been caused by the use of a rod designed for non-corrosive conditions, while the well in question showed a high production of hydrogen sulfide.

The axiom, "don't send a boy to do a man's job," applies to the use of sucker rods. Many rod strings are called on to perform duties beyond their capacity. The maximum load any piece of steel can handle under alternating stresses, such as a pumping load, is the simple product of its endurance limit in pounds per square inch for the fluid condition in the well times the area of the material used. As an example, it would be foolish to attempt to pump a 50 percent salt water well having a weight of 16,000 pounds, with a straight string of ¾-inch rods, the maximum salt water endurance strength of which is only 14,000 pounds.

### Modern Well Studies a Help

A Seminole operator tried to pump a 4000-foot well weighing 16,000 pounds with a straight string of ¾-inch sucker rods. Four strings of different manufacture were used, each string representing an expenditure of almost $1,000. The rods in each case gave serious trouble after 30 days of pumping. The condition was corrected by a well analysis that showed an overload on the small rod string. The top section of the rod string was replaced with 7/8-inch rods having a salt water endurance test of 19,000 pounds, and the well has given no further trouble.

A major California producing company has been keeping unusually complete service records, particularly in one troublesome district that makes an ideal proving ground for sucker rods. Almost every type of well condition is encountered in this area. Ten years ago in this area a rod breakage occurred every 18 days in the average well. Today in the average well the rod string remains intact for more than 150 days. This improvement in rod service is a fair example of what may be accomplished through cooperation between users and manufacturers in determining service conditions and adopting improved standards of manufacture, selection, handling and operation. The manufacturer has made a number of changes as the result of experiments conducted by this oil company in a number of troublesome wells.

Current data show that 15 percent of the pumping wells in the area under observation are responsible for more than 70 percent of all rod failures. It is thus apparent that special study of a few wells may greatly improve serviceability. Breakage is distributed as follows: Body breakage, 62 percent; pin breakage, 28 percent; and box breakage, 10 percent.

This California company has attacked the sucker rod problem from several angles and has reached the conclusion that factors that have improved sucker rod performance are:

1. Improved grain structure of steels and normalizing of upsets.
2. Joint of improved designs, machined to standardized dimensions with definite tolerances.
3. Recognition of fatigue-stress limitations of steels used in the selection and design of rod strings.
4. Use of smaller plungers, reducing loads for deep pump settings without decreasing production rates.
5. Counterbalancing to minimize maximum stresses and load variations.

### Select Rods for Certain Duty

Union Oil Company of California has experienced very little sucker rod breakage during the past five years, the company's policy of selecting rod strings capable of performing a certain duty having prevented abuse that ordinarily causes trouble. In general only two rod sizes are used—¾-inch and 7/8-inch, and the amount of each in combination strings is based on the calculated stress for each size.

The company takes the fatigue limit of ¾-inch rods at about 16,000 pounds, and accepts 22,000 pounds as the fatigue limit for 7/8-inch rods of similar grade. These limits are based on the experience of several years in many fields, and represent an average life of 700 days per break. The figures also are checked against fatigue values for the steels used in rod manufacture, and are considered very conservative by the manufacturers.

The next step is to find the point in a combination string where the stress in ¾-inch rods exceeds 16,000

pounds. This is a function of plunger size, speed and stroke, and weight of fluid pumped. The top ¾-inch rod must lift the full fluid column, plus the weight of all ¾-inch rods, and this calculated static load must be multiplied by an impulse factor that varies with speed and stroke. Curves for impulse factor are furnished by leading manufacturers of sucker rods.

Similarly the top ⅞-inch rod must be checked to be sure the impulse stress does not exceed 22,000 pounds. If it should, the company realizes it is in for trouble if no correction is made. The two courses open under such a condition are: (1) Deliberate overstressing of the rod string and ensuing breakage and down time; (2) A reduced daily production through the installation of a pump with a smaller plunger size, this change avoiding breakage from overloading.

It is the general practice in California among major operators to use small pumps and sacrifice daily production rates, since the smaller pumps usually result in equal monthly or yearly production or revenue. The down time and operating expense with the larger pumps combine to give an excessive production cost.

It is possible to determine in advance from the factors of depth, size of pump, nature of fluid, speed and stroke whether the rods will be overloaded and abused during pumping operations. Availability of 1-inch rods, or larger, will do much to eliminate overstressing under extreme conditions, it is believed.

Handling abuses are not confined to any one phase of rod transportation. Sucker rods suffer various abuses between the point of manufacture and the well site. The manufacturer and the vendor should exercise as much care in transporting the rods from the mill to the supply house, as should be exercised in transporting them from the supply house to the well site.

### Rules for Transporting Rods

A major West Texas producing company has adopted a number of rules for transporting sucker rods. Rod trouble during the past two years has been reduced by adherence to these rules, which follow:

1. Cradle rods between 8-inch by 20-foot timbers, well supported from end to end.
2. Do not let rods stick out more than three feet at either end from supporting truck bed or body.
3. Load rods on top of tubing for complete support while hauling.
4. Use wood spacers between each tier when making up load.
5. Do not allow binder chains to come in contact with rods.
6. In loading rods, rope slings or other suitable means should be used when lifting the bundles.
7. To unload rods, lift them off the truck and lay them down—never drop them.
8. Provide enough workmen to prevent damage from poor support. Three men are required under ordinary conditions, one on each end and one near the middle.

Union Oil Company of California has developed an

**Many of the common abuses to which sucker rods are subjected when unloading are being avoided here. Three men in the flat car place each rod on the bar extending to the truck, where another group of three men are present to see they are stacked properly. Spacers are being placed between each tier of rods, and the truck bed is sufficiently long and well enough equipped with supports throughout to prevent sagging.**

effective method for hauling sucker rods by truck. The arrangement consists of a short type of truck supporting a bolster. Behind the truck is placed a two-wheeled dolly, also supporting a dolly. Upon the two bolsters is placed a continuous floor planking, equal in length to the rods being hauled, and equal in width to the bolsters. On the edges of this platform are placed stake receptacles at intervals of three or four feet. The sucker rods are laid upon the flat platform in layers, and between each layer is placed a hardwood separating cleat, which is fastened to the stakes by means of rings or chains. As the rods are loaded or unloaded these separators are easily pushed to one side. The rods hauled in this manner are not subjected to bending.

Use of a short bed truck with five feet or more of rod extending beyond each end of the truck bed has damaged sucker rods in every producing district. Several companies use specially built trailer beds for hauling from the supply house to the well, yet when it becomes necessary to haul only a few rods they revert to a short bed truck that causes serious damage on occasion. If placed in the top of a rod string, these damaged rods may fail and damage the entire string.

### Injured While Unloading

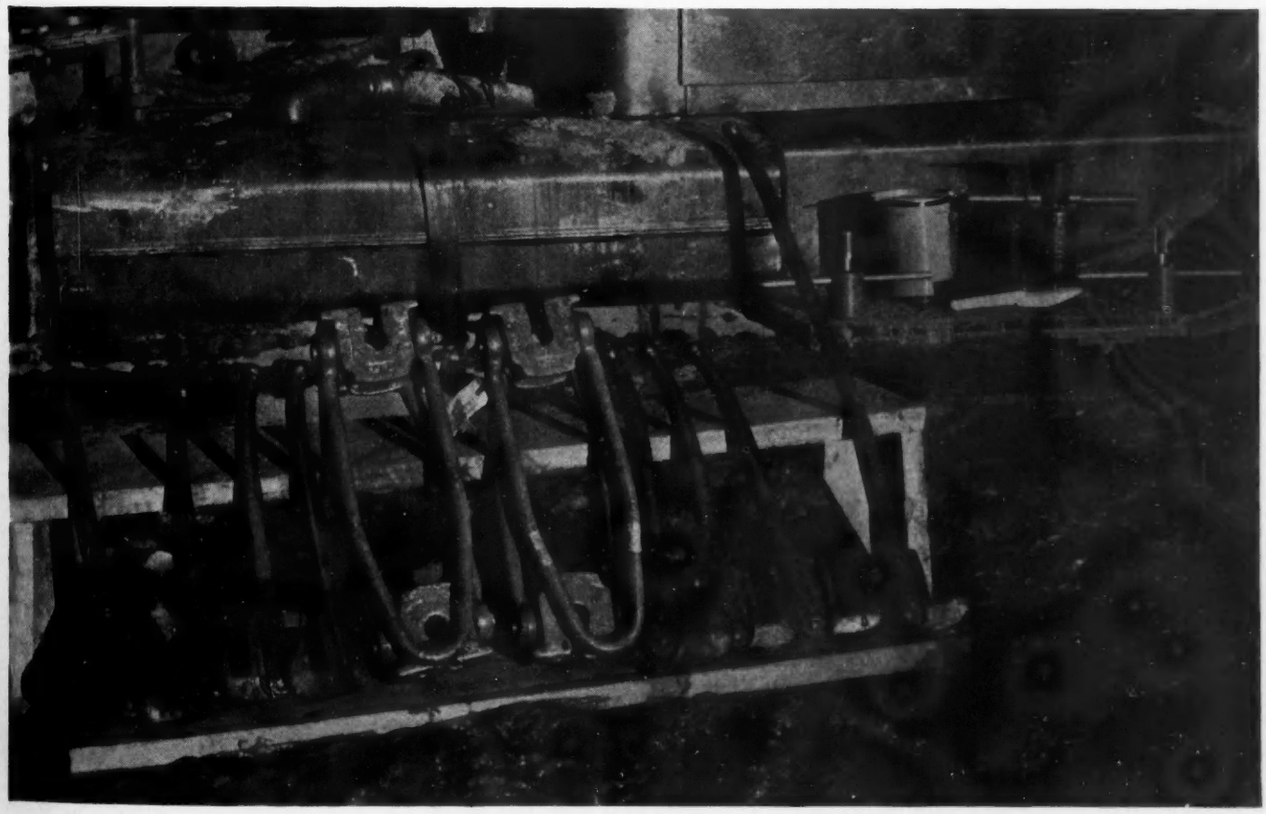
A major oil producer recently experienced a long series of rod breaks that was difficult to solve. Due to the peculiar failure of several rod strings the company made a thorough study of warehousing and field handling practices. Several wells were placed on the pump and a carload of sucker rods had been purchased. The rods had been carefully selected to meet existing conditions, yet the rods started to fail on an average of 25 days after they had been installed. Careful examination disclosed that all of the rods were failing near the upset. A study of the rods proved that in some manner they had been kinked near the upset. The bell nipples were inspected for uneven wear, but none was found.

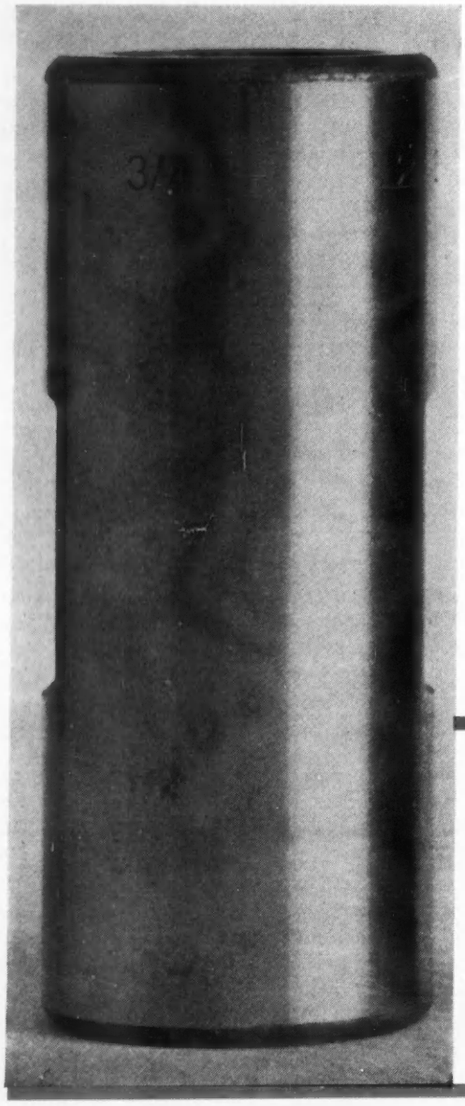
The problem was solved when it was discovered that a new crew had been used in unloading the rods from the car. Further probing developed that the rods had been lifted out of the car, but had been allowed to run "free" down the skids. In doing this one of the end skids slipped and allowed the rods to strike against a post in a manner that threw a small kink in them just back of the upset. The trouble caused the company to change its method of unloading sucker rods.

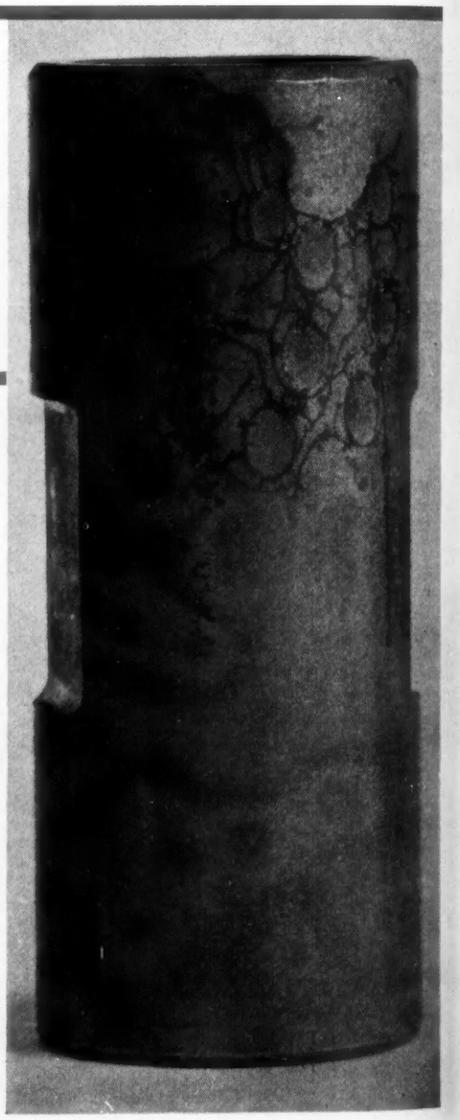
The sucker rod is inherently a straight piece of material, and bending must be avoided as much as possible. Straightening severe bends and kinks results in stressing the material beyond its elastic limit, thus materially reducing its strength. Manufacturers and supply houses exercise more care in handling sucker rods than truck and lease gangs. Poor support of the rods while hauling, and tying down rods in a manner that permits abrasion are common examples of carelessness.

Many sucker rod failures have been traced to damage by trucks and wagons. During the early pumping days a teamster thought little of driving a wagon over sucker rods lying on the ground. Strangely enough the sucker rods often appeared little worse for the experience, but the rods thus damaged that gave three or four months of uninterruptted service probably would have given twice the service if undamaged. An operator re-

**Even the most careful and best trained crew cannot pull a sucker rod string without some damage, unless they have the proper tools for each little operation. The set below shows some of what the "well dressed" crew has in its tool kit.**







**Abusing couplings with a hammer shortens their life. The photograph on the left is a new coupling, while on the right is a coupling that has been damaged by hammer blows. Note how the metal has been broken and cracked (etched to show results).**

stored in warehouse yards should be kept well oiled or painted with a rust preventive to protect the surface against pitting. Protection against weather also is important. Rust nicks may result in serious consequences where a rod is expected to carry a full load. In storing rods, one company stacks them in layers, with four two-inch supports between layers and with the bottom layer six inches off ground. The threads of boxes and pins are cleaned with a wire brush and covered with a medium weight cup grease or other protective coating. As an experiment the company tied the rods in bundles of three, greased the pins and boxes, and wrapped them separately with burlap. The entire rod is covered with crude oil, and emulsified or refuse oil is not used. Rods sent to temporary storage often remain in place longer than intended, and damage to this type of equipment is common. Extra precaution should be taken with rods stored for any indefinite period.

The running and pulling of sucker rods is a trying mechanical experience at best, and because of the small size of the rod and its susceptibility to abuse, proper care seldom is exercised. Frequent pulling and re-running of rod strings increases the possibility of damage in handling, and even greater care should be taken in cently piled rods in his storage yard, and then watched a heavy truck back into them. Several thousand feet of new rods were damaged before they pumped a barrel of oil. Trucks and tractors damage rods lying around pumping wells, and workmen often fail to identify, discard or inspect rods thus affected.

A major operator in West Texas observed the following specific instances of sucker rod handling abuses during a two-year period:

1. Truck driver hauled rods on truck bed with ends dragging on ground, causing kinking, bending and abrasion.
2. Truck driver anchored load of rods to derrick corner and pulled truck from under entire load.
3. Truck driver pulled load of rods off another truck with winch line.
4. Truck was driven over a stack of sucker rods after unloading.
5. Rods were laid on walk and walked on by crew, kinking many rods.

### Storage Is Important

Storage of sucker rods until recently was given little attention by the average producing company. Rods

running or pulling old rods than in handling new rod strings.

Failure of rod crews to understand the limitations of a sucker rod is a common cause of trouble. In many cases the service foremen and pulling crews do not realize that loose joints cause premature failure of pins, due to localized stress at the first perfect pin thread. Such failures actually are caused by the notch effect of the thread, and can be prevented by making the joints up tightly to eliminate any possible working of the pin in the coupling.

### Hammering Injures Couplings

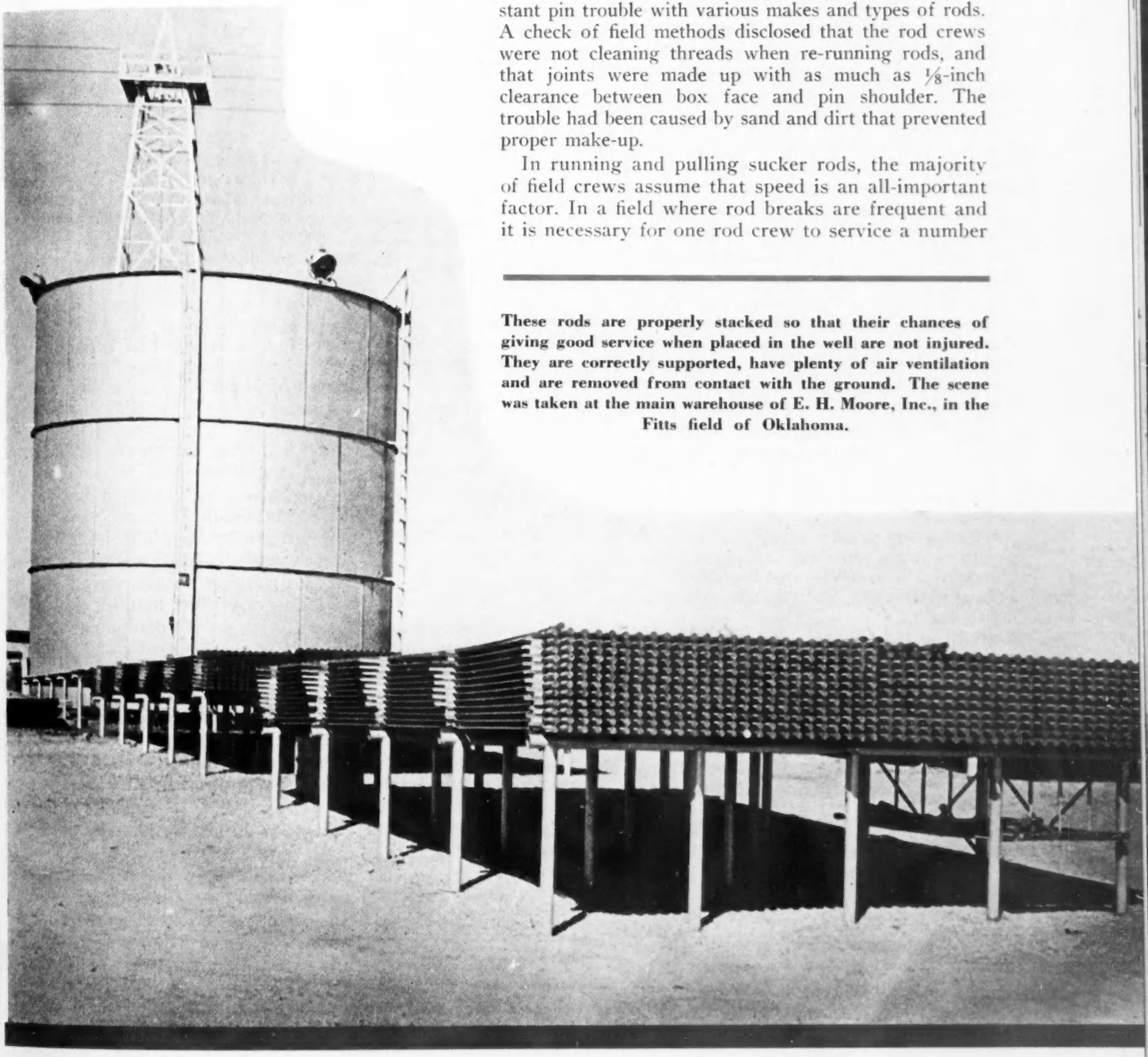
Coupling failures in many instances should be attributed to hammering the coupling when breaking the joint. Although case hardened, the material on the surface is nicked or permanently deformed when hit with a wrench or hammer, and the notch effect thus created causes localized stress in the damaged area.

Washing pin and coupling with kerosene or gasoline and then making up rods without using a thread lubricant causes the metal in the joint to seize, and prevents proper shouldering of the coupling and pin shoulder. Recently a pulling crew complained of trouble in making up joints and was under the impression that joints were too tight. Investigation revealed that couplings and pins were washed in kerosene and no thread lubricant was used. The trouble was corrected by using a mixture of oil and kerosene as a washing fluid.

Numerous pin failures were reported in a long string of high tensile rods used in a Mid-Continent field. The superintendent took a hand and insisted on the use of snap wrenches that would give a tight joint. The trouble was eliminated.

In one district a producing company experienced constant pin trouble with various makes and types of rods. A check of field methods disclosed that the rod crews were not cleaning threads when re-running rods, and that joints were made up with as much as ⅛-inch clearance between box face and pin shoulder. The trouble had been caused by sand and dirt that prevented proper make-up.

In running and pulling sucker rods, the majority of field crews assume that speed is an all-important factor. In a field where rod breaks are frequent and it is necessary for one rod crew to service a number



**These rods are properly stacked so that their chances of giving good service when placed in the well are not injured. They are correctly supported, have plenty of air ventilation and are removed from contact with the ground. The scene was taken at the main warehouse of E. H. Moore, Inc., in the Fitts field of Oklahoma.**

of wells, speed in running and pulling rods is important. It is not more important, however, than exercising a reasonable amount of care in these operations. Negligence in handling sucker rods can contribute as much to rod damage as severe wear in the well itself.

Considering the present trend toward deep well drilling and production, the use of sucker rods in these wells will require care in handling to keep production costs from becoming prohibitive. It has been called to the attention of the oil industry that because of the limitations of the size of rods that will operate in the desired sizes of tubing and still allow ample fluid passage, it is impossible to allow for ample safety factors that are considered good engineering practice. To provide properly for an adequate safety factor in deep wells over a long producing period, it would be necessary to manufacture sucker rods with a diameter of two or three inches. This consideration further emphasizes the importance of elimination of abuses where the rod barely meets requirements.

Such an abuse as bending the rods under the derrick girt at the upper end and dragging them in the sand at the lower end while pulling them up into the derrick with elevators is common, but it is a very bad practice at best. Rods should be hung in the derrick, but if it is necessary to lay them down, clean racks or walkways should be used. Only one rod at a time should be pulled in under the derrick girt at a time.

### Proper Equipment Required

Most of the major producing companies hold to the belief that the first requisite for getting good results from rod crews is proper and adequate equipment. A second requirement calls for proper maintenance of this equipment. The use of broken or worn elevators and wrenches leads to trouble. Snap wrenches have been developed for running rods and their extra cost is well warranted.

Broken bell nipples, worn rod hangers, and worn elevators are very expensive and dangerous implements for field use. An entire rod string may be damaged by the use of a worn bell nipple that kinks the rods every time the elevator is set down. Worn elevators are a distinct hazard to the lives of rod crews, and it is useless to consider their economic aspect in relation to the damage they can do to materials.

Many rod strings are damaged from lack of instruction of rod crews, and it is not uncommon to find more than half of a crew composed of green men. A superintendent of a Mid-Continent producing company discovered one morning that the entire rod crew was composed of new men hired the day before. Strangely enough, the company only two days before ran a motion picture that showed the older men the correct way to run sucker rods. Such an experience is very unusual, but it illustrates the heavy turnover of men in isolated fields and in areas not attractive to workmen.

### Record of Failures Helpful

One company keeps a record of causes of rod failures. One of the most common causes has been labeled "uninstructed field handling." The superintendent showed several hammered couplings that had been abused by green workmen who had been placed in rod crews. One of the hammered coupling failures caused a two-day shutdown and a difficult fishing job. A new workman attempted to pound the coupling loose, instead of using snap wrenches. Several failures resulting from broken pins were traced to the making up of dirty joints by inexperienced workmen. One new man in a rod crew may be permitted, but he should be coached and watched, and should be given the least vital part of the job. It is difficult to keep an eye on even one new man.

### Clean Joints Essential

In one Mid-Continent field a small producing company experienced constant pin trouble with various makes of sucker rods. An examination disclosed that the rod crew had not properly cleaned the thread when re-running the rods, and the joints had been made up with as much as ⅛-inch clearance between box face and pin shoulder. The trouble had been caused by sand and dirt that prevented proper make-up. It is difficult to believe that a rod crew of today would thus abuse sucker rods. Sucker rod threads are necessarily machined to close fits, and when excess dirt or foreign matter is present, it is impossible to make up the threads properly.

Boxes and pins can be cleaned with an oiled rag and wire brush or a special tool for this purpose. A mixture of kerosene and light engine oil in approximately equal proportions is an excellent cleaning fluid. It should be discarded when dirty. Expensive cleaning fluids are not a necessity, but any one used should possess both cleansing and lubricating qualities. Straight kerosene is too light for the purpose.

A West Texas operator experienced serious trouble with a string of double-pin rods, An examination showed that the rod string had been damaged in attempting to make the joints break out below the box instead of above it. Heavy pounding had weakened the rod string during the effort to make it break below the box each time. A method then was developed for pulling double-pin rods. In accomplishing this a regulation rod wrench was lengthened about six inches for use as a back-up medium. The opening in another wrench was enlarged to fit the square of the box. The joint then was broken out at the proper place without pounding or loss of time. For running the rod string back into the well, regulating wrenches that fit the rod pin squares were used. With proper equipment hammering was eliminated by this company.

The sudden application of brakes should be avoided. An immeasurable shock load can be transmitted to a rod string by the sudden application of the pulling unit brake. The elevator often strikes the pumping tee with such force that the rods bounce six inches. Haste makes waste where such carelessness is tolerated.

Richfield Oil Company of California uses a tie-back rack to support the lower end of the sucker rod string when rods are hung in the derrick from a rod hanger. This equipment is allowed to remain in the derrick where wells are pulled often. The rod rack keeps the derrick floor free from any obstruction, and loose ends of the tubing string are looped over the rack for the same purpose. The device is easily made from junk material. It consists of a simple shaft with a number of holes that receive

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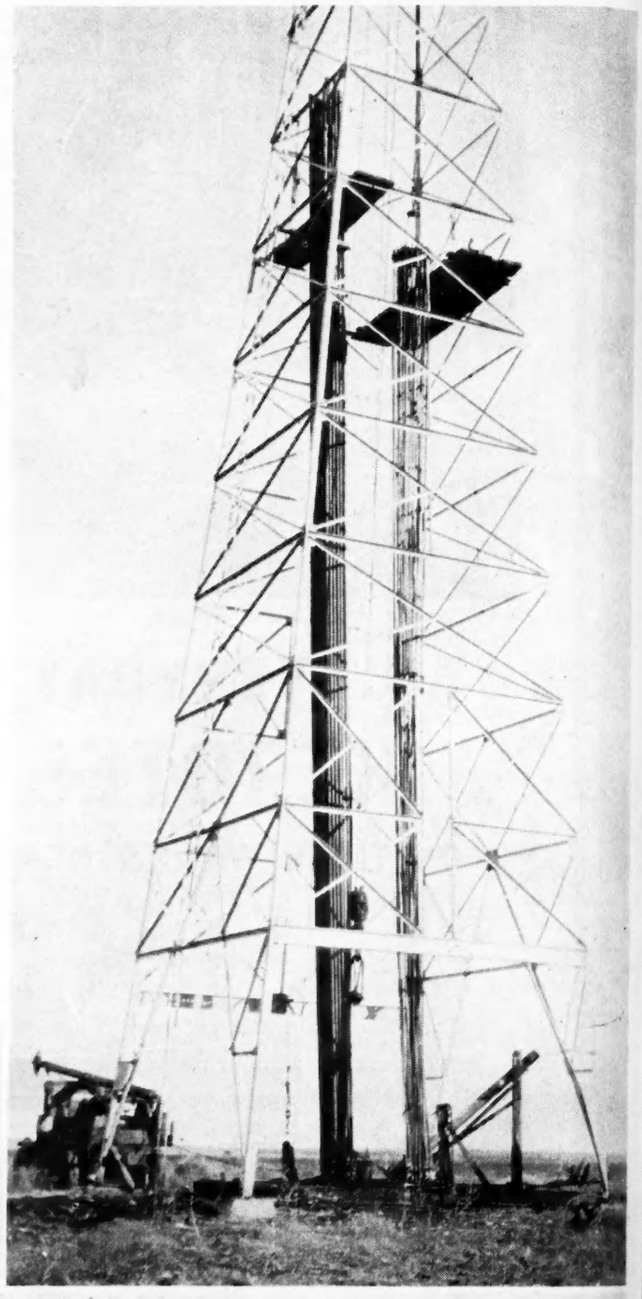
retaining pins, and is fastened to one end of the derrick.

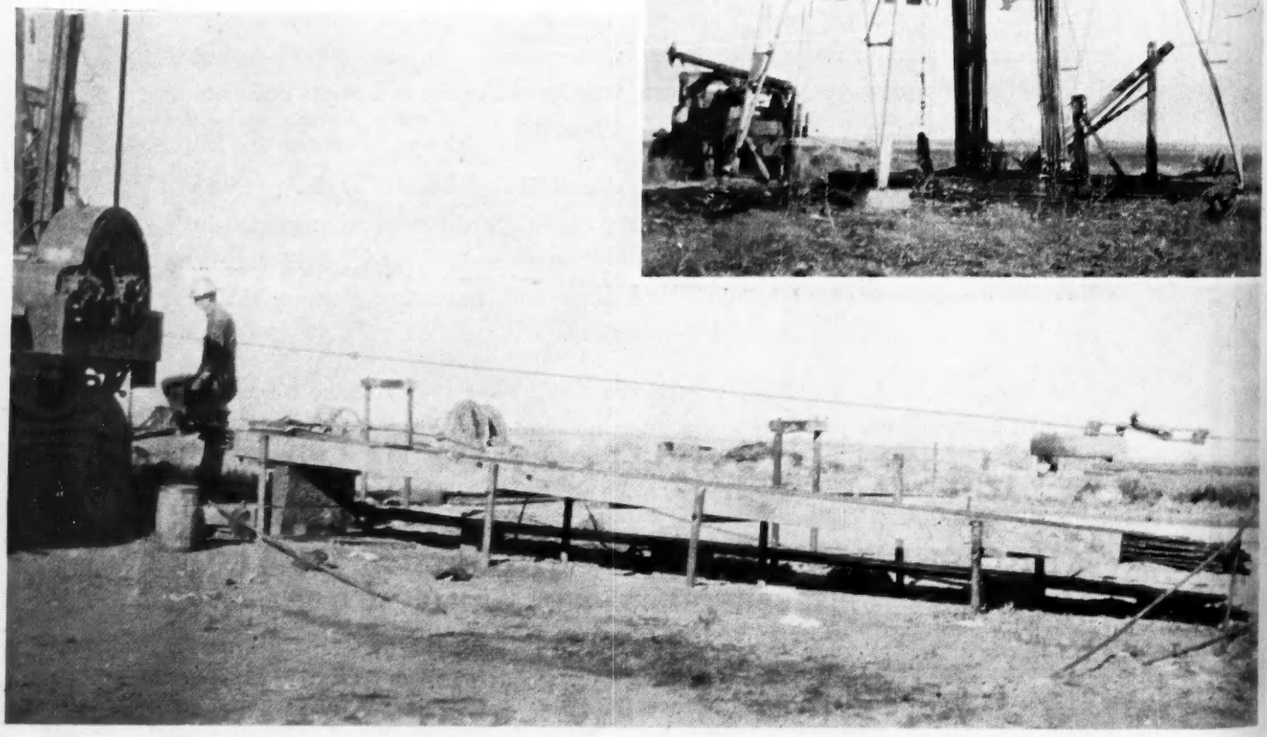
### Must Shoulder Each Joint

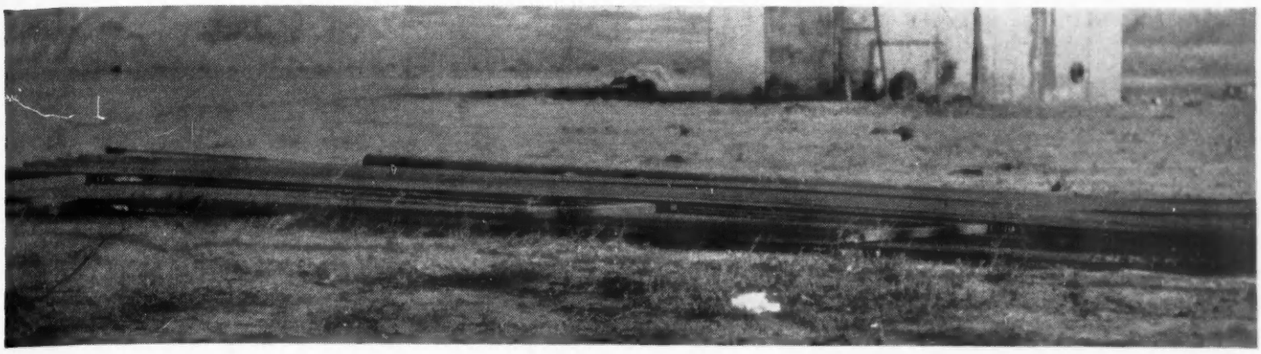
In the setting up of sucker rod joints there is occasion for every type of abuse. It has been definitely established that each joint must be shouldered. In this connection at least two manufacturers have suggested in running new strings that after the two metal faces have fully shouldered, sufficient power be applied to the wrenches to make the box crawl three fourths of an inch on the pin shoulder. Such a practice appears far-fetched, and recent experience with strings set up in this manner prompts caution in its use. Experience gives the good rod man the "feel" that tells him a rod joint is tight enough or too tight.

A common form of abuse to sucker rods is the practice of stretching the rod string excessively while attempting to pull a stuck standing valve. Occasionally trouble is experienced in pulling rods because of hardened paraffin. Use of paraffin solvent, steam, or the more frequent working of the rods will relieve this condition. It is difficult to define specific "stretch" without a specific analysis of such items as length of string and the material and physical properties of the sucker rods. One producing company has found that the nearest applicable "rule of thumb" method involves the use of only one line as a maximum pulling medium. When the rods cannot be pulled with one line, a stripping job should be resorted to, rather than the use of two or three lines.

In many cases loads of more than 45,000 pounds are applied by pulling units in an attempt to unseat insert pumps or to loosen stuck assemblies. To overcome this abuse in an economic manner calls for tact and a study of pump design. Proper use of







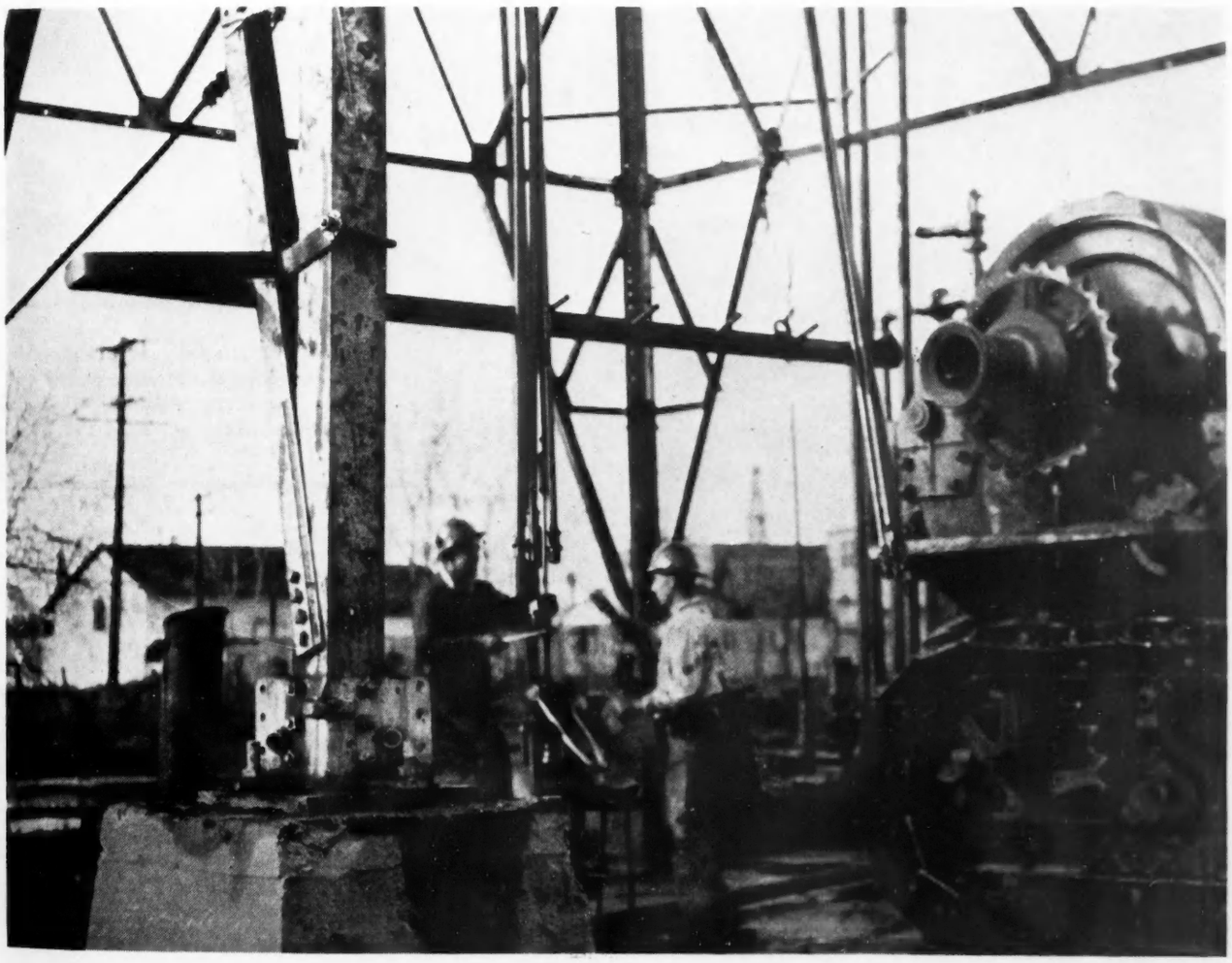
A very common abuse of sucker rods occurs when wells are pulled, and consists of improper racking or hanging. An unbelievable amount of damage to sucker rods may occur in this operation, and without ever being realized by the operator. Rods should never be bent under the derrick girt, nor permitted to drag in the dirt and if racked should be amply supported.

The photograph at top left shows the proper use of a rod hanger during a derrick well-pulling job.

The bottom picture to the left shows rods racked in tiers in a wooden box three feet wide by eight inches deep by 22 feet long, which keeps them out of the dirt and affords sufficient support when out of the well.

Above is another scene of rods racked at the well. While this is not the best method, at least some effort has been made to stack them in tiers, and by putting boards beneath them some dirt accumulation that would come from direct connection with the ground is prevented.

One company uses a tieback rack to support the lower end of the sucker rod when hung in the derrick from hangers. This is shown below. Sometimes such equipment is permitted to remain permanently in the rig, especially when wells are pulled often. However, the rack can be moved easily and quickly. The rack keeps the derrick floor free of any obstruction. The apparatus is constructed from junk materials, and consists of a simple shaft with a number of holes that receive retaining pins. It is fastened to one leg of the derrick.



weight indicators and on and off tools also is important.

Rods can be damaged as easily in the hole as during installation. Some of the factors influencing the life of rods are speed of operation, length of stroke, counterbalancing, fluid pounding, and use of unsteady or loose rig fronts. There are possibly a hundred other mechanical factors affecting rod service.

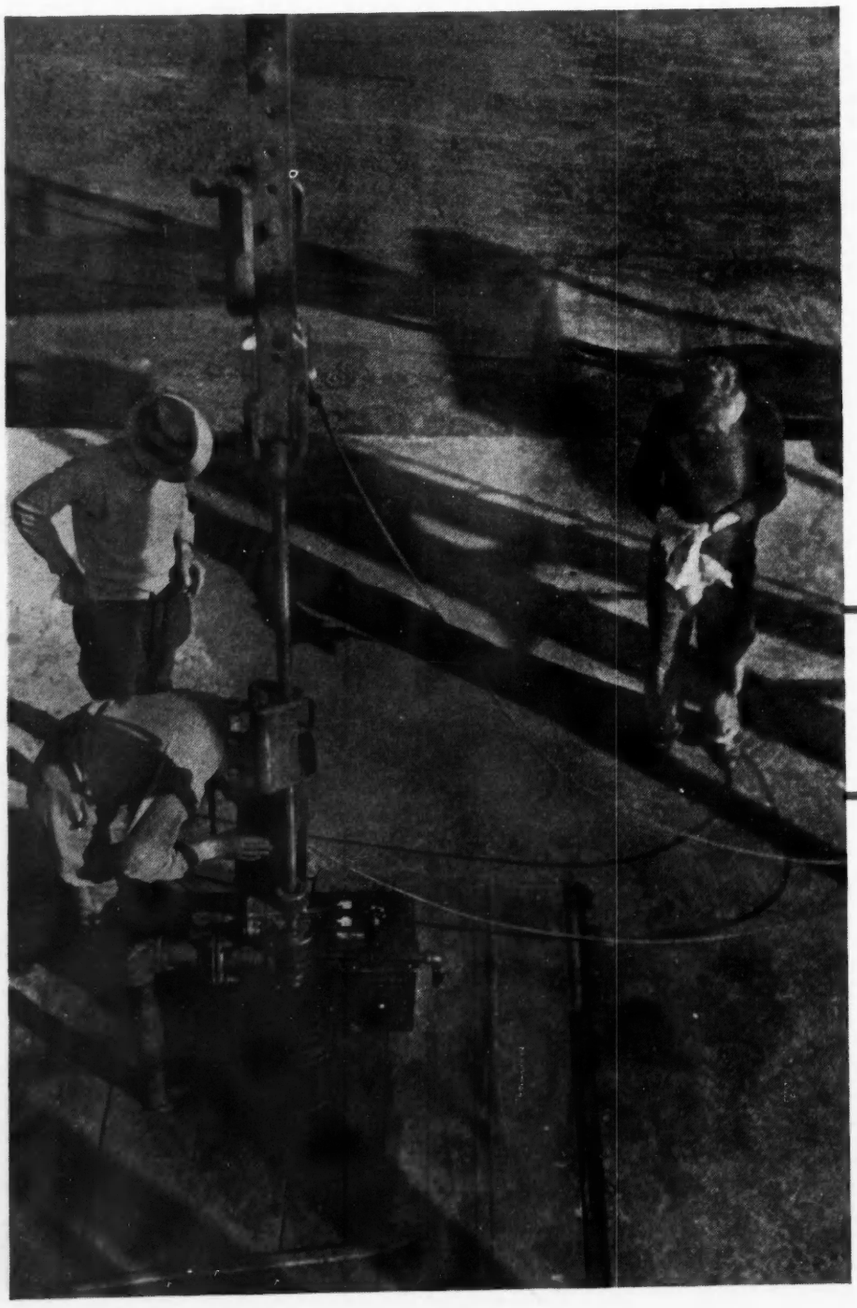
### Unnecessary Abuse in the Hole

Even when rod strings are properly applied to a particular well and properly handled during pulling operations, rod failures eventually will result from fatigue. Subjecting rods to unnecessary shock and stress reversals constitutes a real abuse. To avoid premature fatigue failure, the surface equipment should be kept tight and well lined up. At times the well head connections are too high in relation to the beam of the pumping rig. This results in shortening the stroke, and sometimes is compensated for by decreasing the length of the pitman. The net result is that the beam works to the top of the stroke and the polished rod deviation is not balanced.

The shorter stroke also reduces the life of the rods, since it must be faster than necessary with a longer stroke to obtain the same production. When this condition exists the well head connections should be lowered, or the pumping equipment foundation raised, so that the maximum desired stroke can be used.

The life of the polished rod can be appreciably prolonged and better service obtained from the rod string by positioning the beam so that the arc of the beam end is equally divided over the stuffing box. Lack of adjustment and alignment of surface equipment can throw an unnecessary stress on a rod string. Due to the length of sucker rod strings, surface negligence is greatly magnified in the rod string. The transfer of energy by such a slender medium requires efficiency.

All the major producing companies and most of the smaller



**Modern well studies make it possible to avoid many of the unnecessary operating abuses to which sucker rods may be subjected while in the hole.**

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operators have recognized the advantages of counterbalancing, but there is no agreement on the best means of achieving this end. Proper counterbalancing tends to smooth the peak stresses and to overcome the sharp "lift and drop" effect of the rod string.

A careful study of a troublesome Seminole well proved that poor counterbalancing and other mechanical defects had been responsible for the excessive operating cost. When the well was first placed on the pump, the mechanical operating conditions were thought to be satisfactory. The well from the beginning gave trouble and cost the operator more than $1200 per month in down time and broken equipment, all due to sucker rod failures. A change in counterbalancing, installation of another pump, and the addition of a few heavier rods on top of the string corrected the trouble. The fluid return was increased 10 percent and the maintenance cost reduced to less than $200 per month.

Whenever possible a slow stroke should be used to reduce the number of stress reversals and impact load that would accompany a fast stroke. The use of a longer and slower stroke actually gives a greater fluid return under many conditions, when downtime and a month-to-month basis are considered.

A well study of a troublesome producer at Seminole developed that the mechanical operating conditions of the well imposed stresses on rods far beyond the capacity of any material. The well was one of the largest producers on the lease, despite the necessity for replacing the rod string every 65 days. The good fluid recovery prompted the company to worry along with frequent rod replacements. Several brands of sucker rods were used, but the average service life dropped to 60 days. A careful study by an engineer disclosed that the well actually was pumping off, a condition that caused high rod stresses. Fluid pound had been given no consideration during preliminary examinations. Changes in the pump, operating speed and counterbalancing were made, and sucker rod troubles were almost eliminated. The rod string now in use was installed more than a year ago.

Abuse may be defined as any practice that prevents obtaining the maximum fatigue life from sucker rods. Operating abuses are perhaps the most common form, due to the many intangible factors brought about by inability to know what actually takes place below the surface. Failure of a rod string to deliver the expected quantity of fluid or to give the expected service justifies a careful well study.

### Operating Rules Prove Helpful

A large producing company in California has made an extensive study of well conditnons, and has formulated a number of operating rules. The survey proved that sucker rod strings were being abused in many ways. This company reduced the size of insert type pumps to give only the required amount of fluid with a minimum effort. In a number of instances the pump sizes were reduced from 2¼ inches to 1 1/16 inches. This practice proved very effective in small wells. Better counter-balancing also reduced rod breaks in more than 100 wells.

The company studied peak loads and their effect on rod service. The peak load in a large group of wells was reduced from 12,500 pounds to 5800 pounds, and rod trouble almost ceased. The peak load in several small wells was found to be entirely out of line with either potentials or allowables.

In an effort to eliminate sucker rod abuse, this company purchases rods so they may be used on a "progressive downward" basis. Cheap rods are never used, and a rod that barely meets requirements for a certain well is avoided. Only the best grade of rods are purchased and used, although such a rod may show a high safety and expense factor. After the rods have had hard service in deep wells, they are placed in shallower wells. The arrangement has shown an extended service life for rods used in several fields and passed from one type of duty to another.

### High-Speed Pumping Injurious

Pumping a well at a very high rate of speed, as often is done in taking potentials is injurious to rods. This practice does not allow the rods to fall freely, and the beam actually pushes the rods down in a cramming effect. A pump with a tight plunger will tend to bind, and also cause damage to sucker rods in the same manner.

Many rod strings are stretched beyond their elastic limit by attempting to pull loose plungers that are sanded up. This abuse also applies where an effort is made to unseat insert pumps that are stuck. An overstress may be imposed on rods during a simple attempt to correct a questionable situation.

Rod strings are abused in attempts to "pump up the hole," a natural result of efforts to take advantage of high fluid levels. Care should be taken to give the pump proper submergence, but it does not follow that maximum submergence is good practice where a well does not "pump off." A reduction in the mechanical lift is permissible where there is no danger of fluid pound.

The use of shock absorbers is a good practice where wells are unavoidably "jerky" in operation or where it is necessary to pump at high speeds. Rod guides serve a good purpose where there is wear from rubbing of rods on tubing.

The abuse of sucker rods in crooked holes has been widespread and will continue for years. Most of the pumping wells were drilled when little importance was attached to the necessity for drilling straight holes. Rod wear must be expected in pumping wells that deviate sharply from vertical. Rod guides have been used to advantage in several districts, but the practice is not general.

In replacing parts of a string with new rods, the additions should be put on top of the section where most strength is needed. Should the old rods part, the new rods would not be damaged by dropping.

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## PIPE CORROSION, ELECTROLYSIS

# Cathodic Protection

By A. L. BLACK,
Ford, Bacon & Davis, Inc., Engineers

IN any discussion which concerns electrolysis and pipe corrosion it is desirable that the meaning of the terms be distinctly understood.

When stray current electrolysis was first recognized as a potent factor in the untimely deterioration of buried city pipe, the belief arose that all electrolysis was the result of stray-current attack. Pitting which was just as severe, but which could not be directly attributed to this cause, was known as plain "corrosion" and charged to chemical disintegration of whatever origin. Thus came into being a distinction which has no basis in fact.

### New Terms Suggested

In the light of recent knowledge, which indicates that the greatest majority of underground corrosion is electrolytic in nature, more suitable terms would be "stray-current electrolysis" and "electrolysis," making the former a limited subdivision under the general head of the latter.

Destruction of pipe by chemical attack, such as by soil acids, is an alternative to the thought that underground corrosion is an electrochemical rather than a chemical phenomenon. However, it has never been proved that electrical phenomena are not a part of chemical disintegration of iron. It is known, furthermore, that soil water need be only a good electrolyte to set up a highly corrosive condition.

### Corrosion From Acid Only Rare

Important corrosion purely because of the presence of acid in the soil water, either as a natural component or as industrial waste, is so rare that we are justified in disregarding it in this discussion. This is the more true since we have abundant evidence that the same means which will curb stray-current electrolysis will effectively combat other corrosion.

The destructive action of any current, whether stray or galvanic, is due to the fact that it carries into solution minute particles of metal when passing from the metal to an electrolyte. In this connection, when two iron strips are placed in an electrolyte and a potential impressed across them, the anodic strip will be seriously corroded, while the cathodic strip will be virtually unaffected and certainly not corroded.

The foregoing indicates the operation of stray-current electrolysis. Since certain types of trolley-line construction have been important sources of this kind of pipe destruction, an example of this type of action will be an apt illustration.

Let us, for the sake of simplicity, assume an underground pipe line paralleling a poorly bonded trolley-car track in a region of low resistance soil. The return current, encountering a track bond so poor that a path of less electrical resistance is offered through the soil and the pipe, leaves the track (which action corrodes the track), and utilizes the pipe as a conductor. At the point at which the pipe no longer acts as the path of least resistance, the current leaves it in turn. At this point, pipe corrosion occurs, proportional in total amount to the current flow, causing a comparatively large diminution in wall thickness if the anodic area is small, and correspondingly smaller diminution if the anodic area is large.

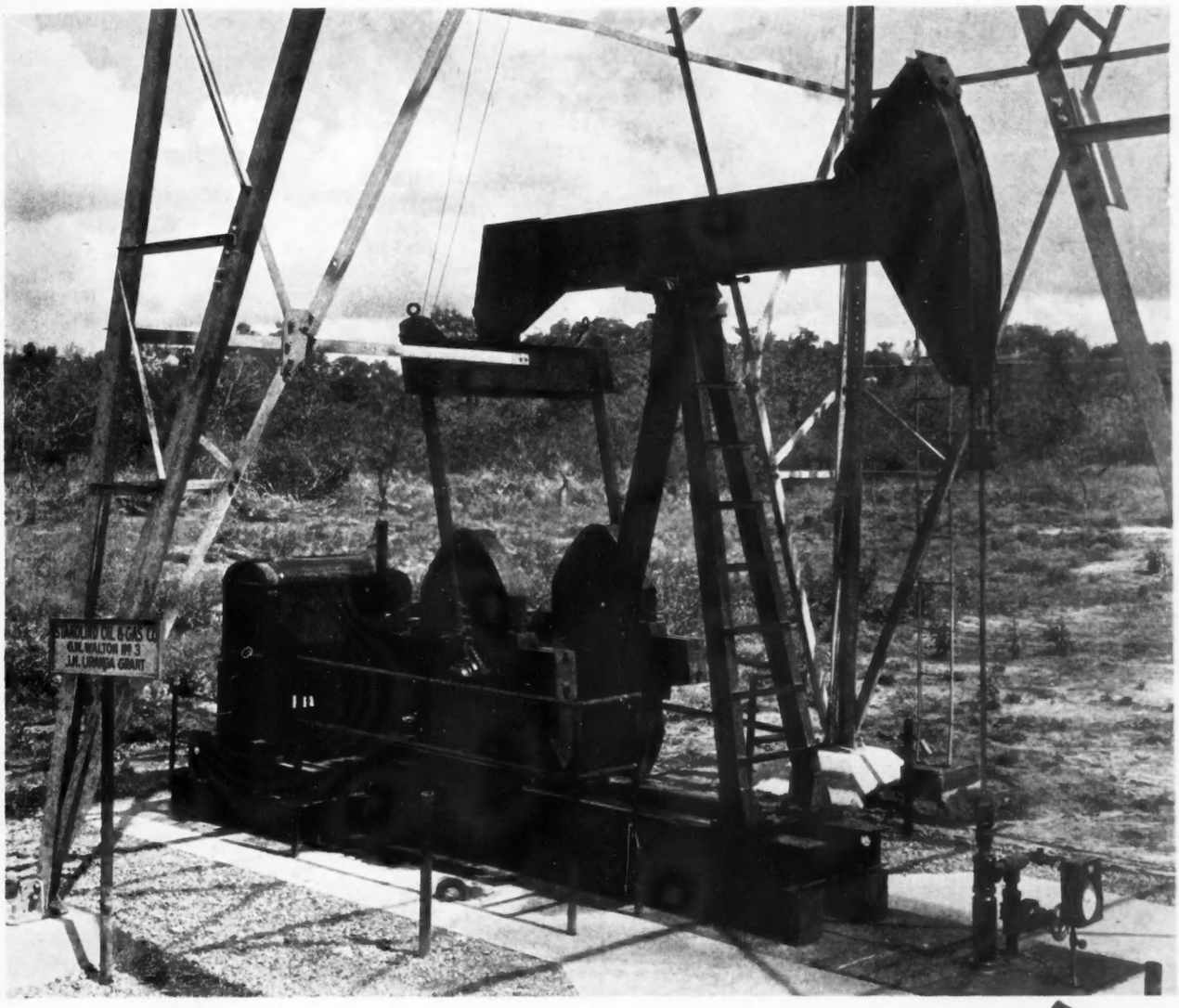
### Only a Closed Circuit Needed

Flow of electric current requires only a difference in potential and a closed circuit. Laboratory tests have shown that a difference of potential exists between two pieces of soft steel cut from the same strip, and that differences of potential exist between different portions of the same piece. As great a potential difference as 350 millivolts on a single piece of soft steel has been found between a polished portion and a surface from which the millscale had not been removed. Immerse this piece of steel in an electrolyte and a current will flow from the polished surface to the oxidized portion. The body of the steel completes the circuit. This current will reach a maximum shortly after the beginning and will gradually decline.

### Law of Mass Action

The rapidity with which corrosion proceeds, in general conformity to the law of mass action, will depend largely on how effectively the products of corrosion are removed from the corroded area. If there is no motion nor change in the nature of the electrolyte, the products of corrosion tend to remain in place and retard the current flow and, consequently, the rate of corrosion. Similarly, if the products of corrosion are carried away, the current-flow and corrosion continue at a higher rate.

There are indications of similar effects in the cor-



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rosion of buried pipe. When fresh soil water is borne to the pipe, carrying possibly a somewhat different electrolyte from time to time, the rate of corrosion is higher than when water movement is restricted or absent.

### Ratio of Cathodic to Anodic Area

It should be stressed here that even an extremely small spot when exposed to the action of electrolytic ground water (and all ground water will conduct electricity), will probably have on its surface points of enough potential difference to cause current flow. The larger the cathodic area in relation to the anodic area, the greater will be the current density at the point of corrosion. This results from the lowered surface resistance offered by the larger area. By Ohm's law, the lower the resistance, the greater the current flow at a fixed potential difference.

The cause of this galvanic potential is believed to be related, among other things, to the thickness and nature of the millscale coating. Naturally, also in the handling of pipe, millscale is destroyed in various places, exposing the bright metal beneath. This, in conjunction with the varying proportions of different iron oxides in the scale, offers a logical source of the potential difference.

### Electrical Methods

Electrical methods are designed to control, rather than prevent, electrical phenomena. Since current flows from high potential to low potential, it follows that corrosive soil must be at lower potential than the pipe it corrodes. If an adjustment is made so that soil potential is higher than pipe potential, current cannot flow from the pipe into the soil. Any electrical protection, whether galvanic or other, has the main purpose of lowering the potential of the pipe with respect to the soil. In theory, maintaining the pipe even slightly negative to the soil should terminate all corrosive action, but it has been established that a practical minimum of possibly as much as 0.25 volt is surest. While evidence is still inconclusive as to the reason why a definite reverse potential is necessary, it appears probable that this reversal represents a safety factor to offset current variations or that some wholly minor corrosion faction may be non-electrical in nature.

Broadly, electrical protection falls into two classifications, protection by the use of electric power, whether from generators near at hand or from purchased power, and protection by the utilization of the galvanic action between unlike metals. Each has its advantages and disadvantages.

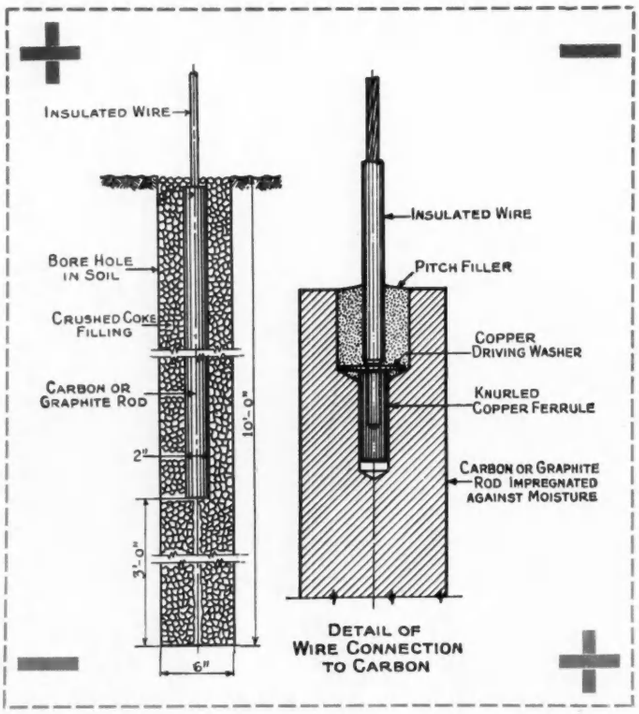



**FIGURE I**
**Coke Anode for Pipe Line Drainage**

### Cathodic Protection

In cathodic protection of pipe lines, ground beds have been employed with both generated and purchased power. Such beds usually consist of a number of pipes or electrically connected scrap metal buried in a considerable area, located preferably in low-lying, wet soil of low resistivity and, where feasible, at the mid-point of the pipe system, but generally at some distance from the pipe line laterally. This collection of iron is so connected as to be the anode of an electrical circuit in which the pipe line is the cathode. Hence the name cathodic protection. The soil potential in the neighborhood of the various anodes is considerably elevated, and the current flows through the soil from this area to the various portions of the line, to return along the pipe, which has been carefully bonded so as to be electrically continuous, to the wire connection and thence to the negative side of the source of power. By this method the potential of the pipe line can be lowered with respect to the surrounding soil, and average corrosion definitely reduced.

### Has Drawbacks

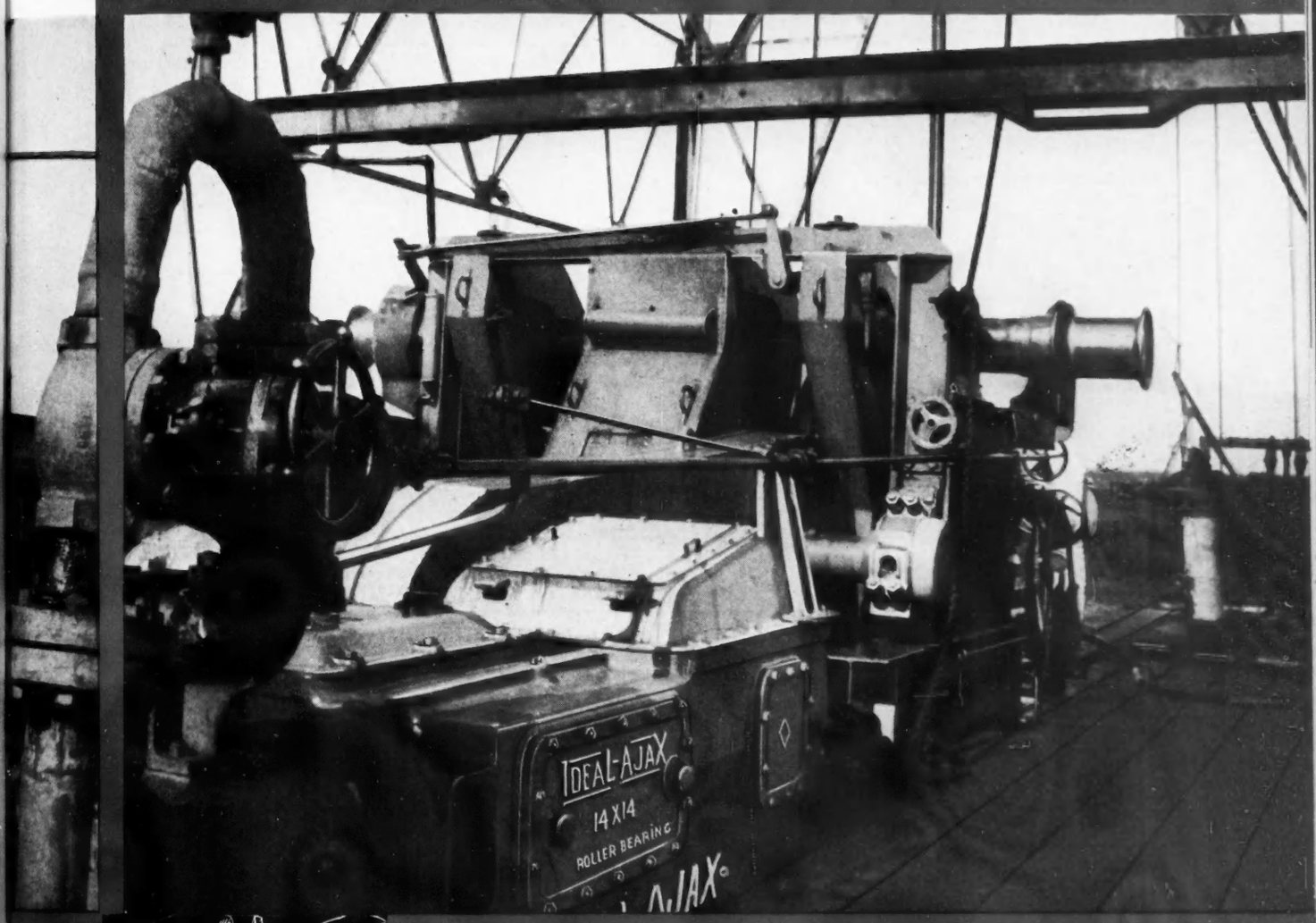
Drawbacks to this ground-bed type of protection are that it is comparatively inefficient and that it is therefore costly. To protect distant portions of a poorly coated line at all, the part of the pipe system nearest the ground bed must be tremendously over-charged, and even at inordinately high current output, distant ends are generally without adequate protection. In addition, while the pipe potential is lowered, no appreciable advantage is taken of the material increase in soil potential at the ground bed itself because of the drop in potential due to the resistance of the soil between the ground bed and the pipe line. Longitudinal soil resistance also becomes a very large factor when the protected section is of any considerable length. Distant placing of the anodic area sacrifices a substantial part of one of the most desirable features of power protection, namely, its flexibility.

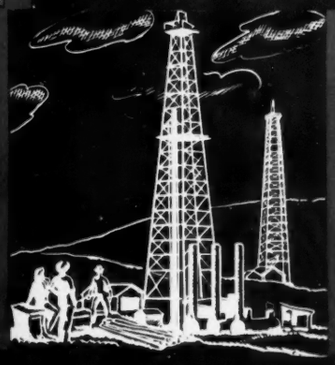
### Method of Distributed Anodes

The method of distributed anodes is an improvement on the ground bed type of protection. In one system of distributed anodes a plurality of carbon anodes, interconnected in groups, is placed close to the pipe line and a current made to flow from them to the line. Figure 1 shows construction of a coke

# A VETERAN IN THE ROANOKE FIELD

## Now drilling below 10,000 feet



The IDEAL-AJAX 14x14 Steam Drilling Engine shown above is drilling a well considerably below 10,000 feet in the Roanoke field, Jefferson Davis Parish, Southern Louisiana. ●This "old-timer" is delivering typical IDEAL-AJAX performance, having been previously used on a number of wells in the same field where production was obtained from 8,500 to 8,850 feet. ●Every IDEAL-AJAX engine is built with reserve power to meet your utmost requirements. Contact your nearest National Supply representative for the complete story.

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AJAX ENGINES

anode, and Figure 2 shows diagrammatically how a unit operates. Longitudinal spacing is such that there is no great difference in potential between the end of the section protected by an individual anode and the portion directly opposite the anode.

From this it can be seen that the more current required, the closer will be the spacing of the anodes. Also it can be seen that advantage is taken of the rise in potential of the soil in the vicinity of the anode, Figure 3.

Higher soil potentials at the pipe surface combined with lowered pipe potentials give increased potential difference with less expenditure of energy.

Furthermore, the current output of each group of anodes can be regulated so as to provide the optimum value for separate sections of the system. This is important because there is often wide variation in current requirements of different sections.

### Use of Tamped Coke

It was learned with one of the first installations of this system that an unprotected carbon anode would be destroyed by complete oxidation to carbon dioxide at soil temperature. The nature of this phenomenon was carefully checked by collecting and analyzing the gas given off in the course of this reaction. The destructive action, however, can be largely transferred to a surrounding thin bed of powdered coke. The coke need only be tamped, and its loss due to oxidation periodically made good by an additional supply.

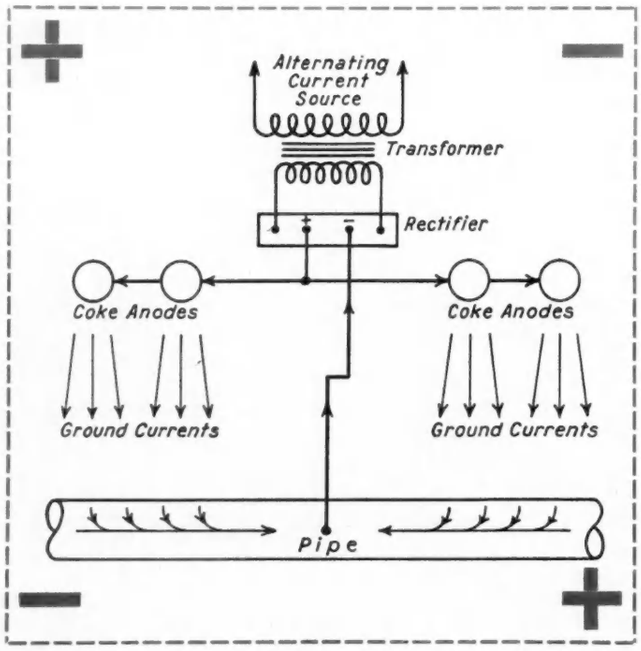


**FIGURE II**
**Diagram of Cathodic Protection Unit**

The question arises, why use carbon for the anodic material when that means the immediate loss of approximately three-quarters of a volt (the amount by which carbon is negative to iron) which must be overcome before the impressed voltage begins to take effect as a protective agent?

One main consideration is that just cited: That the renewing of the carbon anode is a simple and inexpensive process as compared to replacing iron electrodes which would corrode unevenly and hence inefficiently. The use of coke makes possible a greater surface area for the same weight, and results in a considerably reduced surface resistance. A substantial factor in the desirability of the coke anode is connected with a point discussed earlier, which is that products of corrosion remaining in place diminish the current flow and restrain the rate of corrosion.

Naturally, it is desirable that the coke be consumed at a uniform rather than at a decreasing rate. Since the principal product of the corrosion of carbon is $CO_2$, a gas, which is enabled to escape by the porous nature of the anode, there is no appreciable tendency for the current output to fall off. Iron anodes, by their corrosion, tend to provide less and less current. These two facts explain why the sacrifice of efficiency in using coke is not as great as casual investigation would suggest.

### Galvanic-Couple Type

Zinc anodes are an example of the galvanic-couple type of protection, and for the purpose the only anodes so far developed of a suitably cheap material. A potential difference of approximately three-eighths of a volt exists between zinc and iron with the zinc positive to the iron. In a typical installation of this kind of protection zinc rods are connected to the pipe at suitable intervals by means of a No. 10 rubber covered wire without braid. The rods, of which the preferred cross-section is round, have an iron-wired core, to provide increased strength and for another very substantial reason. Due to current density effects, the zinc tends to be carried into solution from an anode in such a way that in a short time a zinc rod would be corroded in two a few inches from the connection, with the result that with no wire core the portion not directly connected with the pipe could exert no protective effect whatsoever. With the iron-wire core, even the separation of the zinc into many segments by complete corrosion of intervening areas would have little effect in reducing the current output of the zinc, because the core maintains metallic contact with the pipe conection and is itself protected by the zinc. In this way, the availability of substantially all of the zinc for pipe protection is assured.

### Differences Between Carbon and Zinc

There are certain obvious differences between the multiple-carbon-anode and the zinc-anode types of protection. Depending upon the amount of protection needed and the character of the soil, location of power sources, labor costs, and a number of factors, either may be cheaper initially. Zinc has no maintenance charges except replacement at long intervals determined largely by the initial anode dimensions. The powdered coke must be watched and may require rather frequent additions, depending on the current output, but probably in the usual case at least once a year.

There are times, as at present, when extraordinary demands in the zinc market may introduce real difficulties in quantity purchases and meeting delivery requirements. This is not true of power protection equipment. Although the adjustability of power pro-

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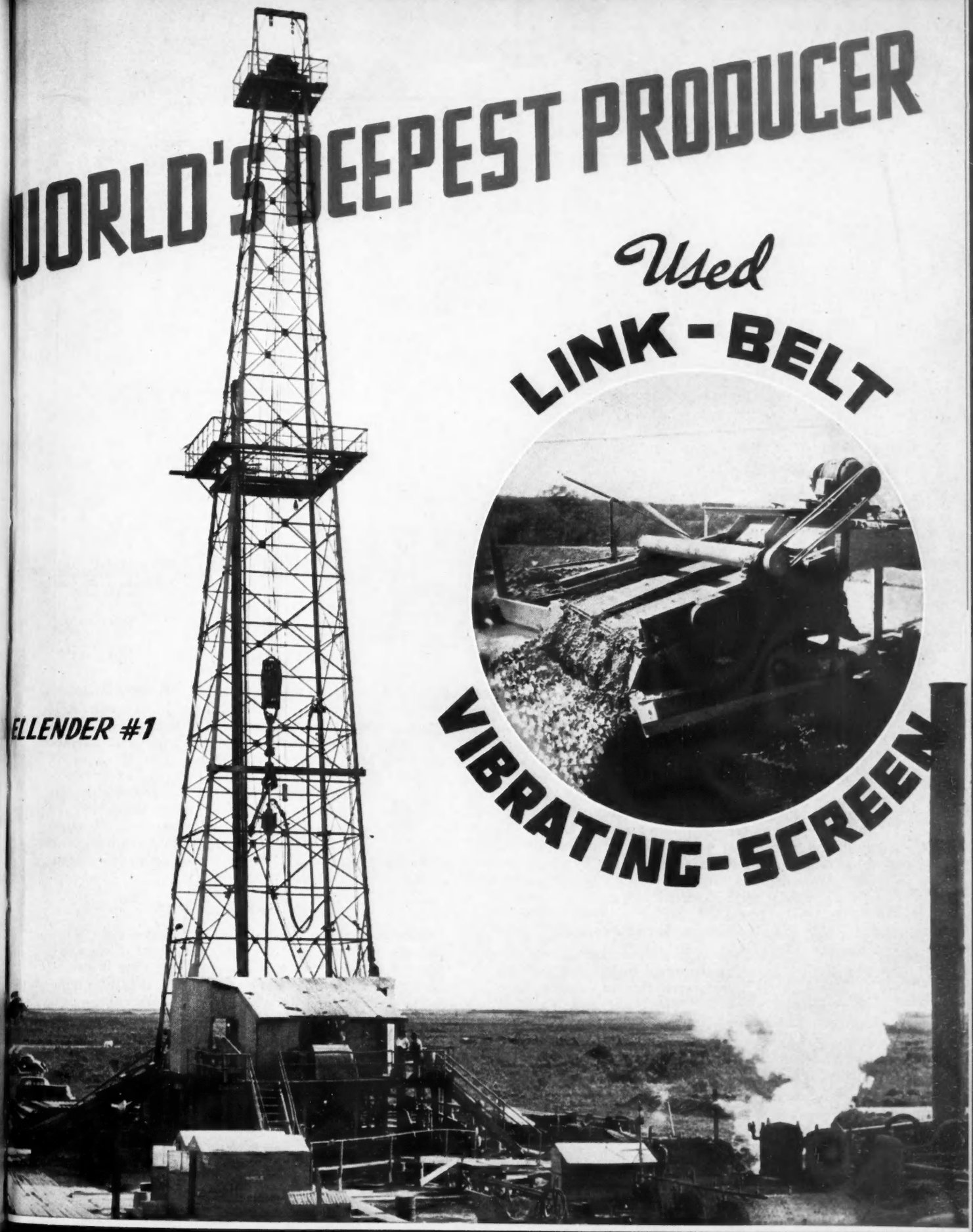
*Used*

**LINK-BELT**



**VIBRATING-SCREEN**

*ELLENDER #1*



**LINK-BELT** *Vibrating* **SCREEN**

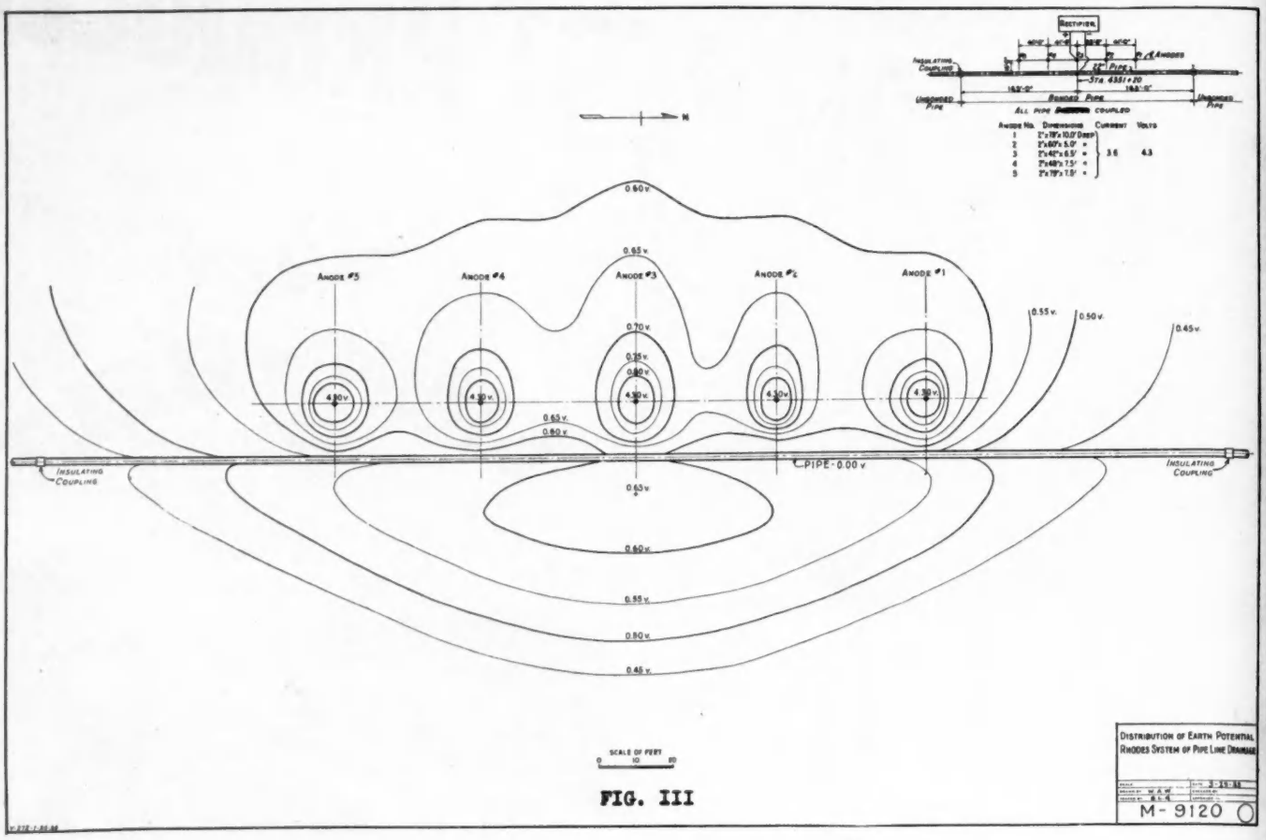



FIG. III

tection is in its favor, the fact that it must be adjusted is not. Zinc as now employed is not susceptible of manual adjustment, but on the other hand, it adjusts itself and accommodates itself to changing conditions. When its maximum output is needed it is delivered, and when the demand drops, the output drops. Thus, in dry weather the zinc deteriorates more slowly than in wet or changeable. There is, however, the possibility under special circumstances that the maximum possible current output of the zinc might not be sufficient, or the available potential difference too low, a condition which in general does not exist with external power.

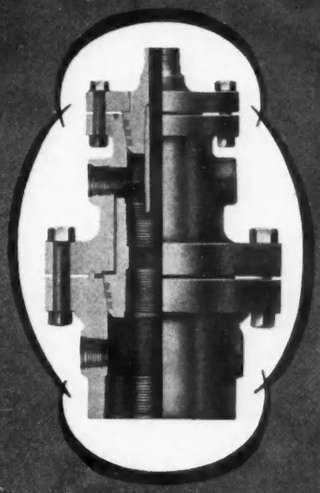
### No Service Interruption

Cathodic protection of either type is a desirable alternative to reconditioning because it can be installed without any interruption of service. Installation costs are low and operating and maintenance charges are negligible. Generally, no heavy equipment is needed to install it.

The point should be made that despite the gradually widening acceptance of cathodic protection very little is known about the subject. Those who know most, and that is not very much, have made substantial contributions to the knowledge of the subject, and these contributions indicate that further advances may be expected. Tentative conclusion may be drawn from research that bonding to assure electrical continuity is susceptible of considerable improvement. Laboratory research may suggest some change in the composition of pipe-steel through which it will act in more complete harmony with cathodic protection to achieve indefinite life extension.

### May Combine the Two

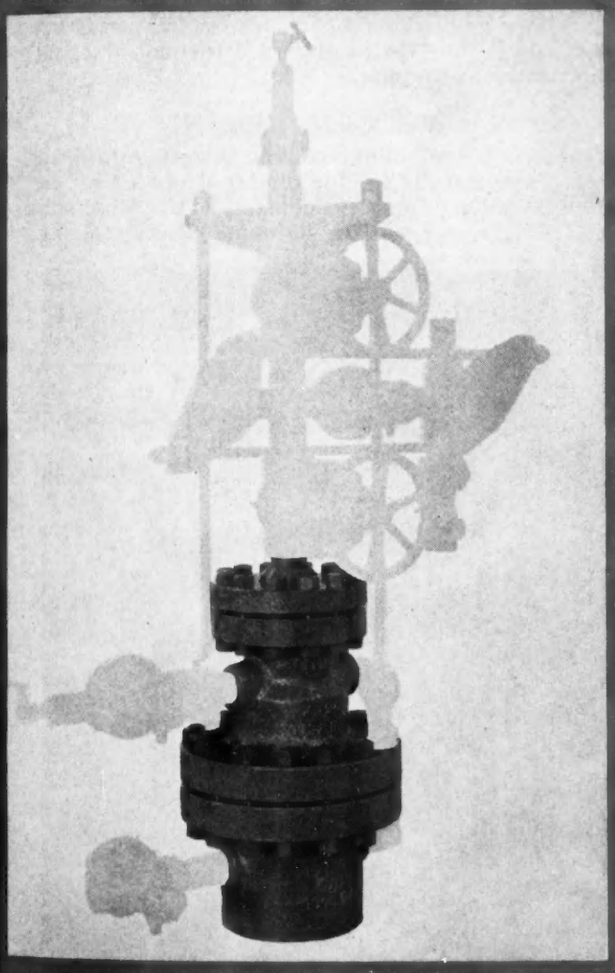
It is reasonable to believe that some day, when cathodic protection is no longer thought of as a last resort to save already badly corroded pipe lines and its applications and savings are more fully understood, this protection will be applied in conjunction with suitable coatings as a matter of routine to new lines and installed with the laying of the pipe. When this time arrives the expense of frequent reconditioning and replacement will become a thing of the past.



DRILL 'EM·· CONTROL 'EM·· COMPLETE 'EM

*Safely thru this new*

# DREADNAUGHT COMBINATION HEAD



Completely assembled Christmas Trees, built to required specifications on the new "HZP" Combination Head, are now a regular part of the Dreadnaught line of oil field equipment.

**DRILL 'EM** The full-opening body of this new Dreadnaught "HZP" Combination Casing and Tubing Head permits the completion of the entire drilling operation through the head. It is a 3,000 lb. working pressure head, each assembly being tested to 6,000 lbs. hydrostatic pressure. Standard ring joints are provided between its series 900, A.S.A. standard flanges. It is made entirely of alloy steel. Hangers are specially heat treated to produce a minimum tensile strength in excess of that of Grade "D" Casing.

**CONTROL 'EM** Designed for use with blowout preventer equipment, the "HZP" head provides for complete control of the well while drilling, running and landing casing, drilling in and running tubing. Blowout preventer equipment flanges directly to the head. Where tubing is run against pressure, the tubing head can be furnished with T-segment bolts to hold the tubing hanger in the body of the head after tubing has been landed. The well thus sealed in, blowout preventer equipment can be removed in absolute safety.

**COMPLETE 'EM** After blowout preventer equipment is removed, a split lap-joint ring bolts down over a lip on the tubing hanger, and the Christmas Tree is made up on top of the hanger. The "HZP" head is available with or without the complete Christmas Tree assembly, which is built to required specifications.

## BEAUMONT IRON WORKS COMPANY

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*"Selling Through Frick-Reid Stores Everywhere"*

# System for Cooling Solves Problem of Temperatures

HIGH mud temperatures, encountered in the drilling of the Tom F. Hunter and Jack Frazier's Gage 1 in Anderson County, East Texas, are being controlled successfully through the use of an original mud cooler.

Surface casing was set at 1732 feet, and the well now is drilling below 9000 feet without the use of a protection string. The successful drilling of this long section of open hole was accomplished by careful attention to the drilling mud. The Eagleford section, especially, often proves troublesome from the standpoint of sluffing and caving. However, in Gage 1, with the viscosity of the mud never below 24 and the weight at 10.5 pounds per gallon, no trouble was experienced with the walls of the hole.

### Temperature Increases

On reaching the depth of 6000 feet, there was a perceptible increase in temperature. Aside from the destructive effect of high temperatures on the rotary hose, the pump pistons and valves, the drilling mud presented a noticeable tendency to gel. By thinning the mud, the gelling could have been overcome. However, while drilling the Eagleford it was not practical to add water to the mud.

### Mud Cooler Built

A mud cooler and a mud cooling system of his own design is successfully solving the problem for Frazier. The mud cooler (Figure 1) consists of a 20-foot section of 4-inch pipe with a series of slots cut along

**FIGURE 1**

**The mud cooler, which consists of a 20-foot pipe with series of slots and series of baffles.**

# *Mud High*

By DENIS S. SNEIGR

**An East Texas wildcat encounters high formation temperatures that so heats the mud a destructive effect is had on several drilling machinery parts. The resulting problem is economically solved by a rotary fluid cooling system that successfully reduces and controls the mud temperatures.**

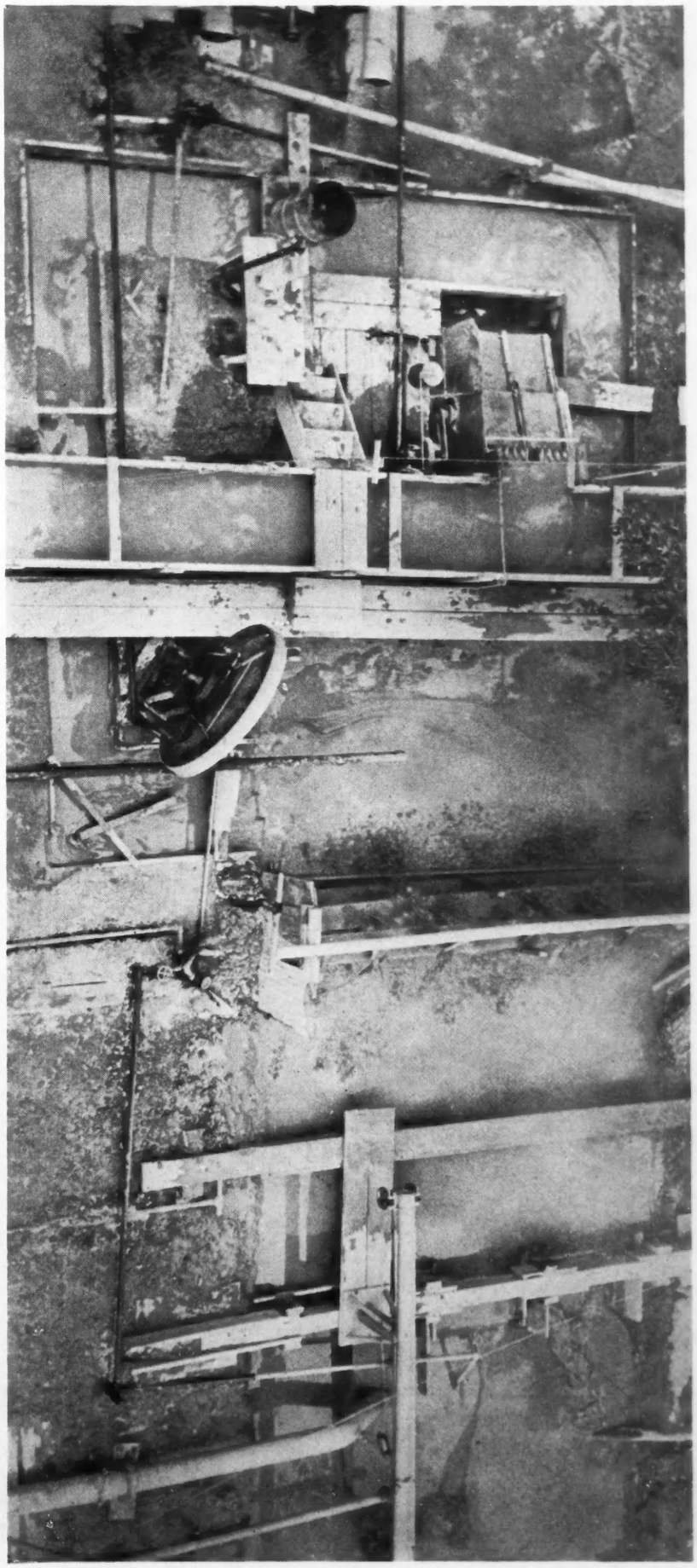


**FIGURE 2**
**Arrangement of mud troughs. Note fan mounted near cooler in the center of the photograph.**

the underside. The pipe is mounted on a wood frame about six feet above the settling pit and below the pipe are a series of baffles set at an angle.

Hot drilling mud is picked up from the suction pit and forced through the slotted pipe at the rate of 600 gallons per minute. Forced into the 4-inch pipe at this rate, the mud sprays through the slots and down onto the baffles below. The baffles are arranged so that the mud splashes down from the higher to the lower levels.

Mounted about 15-feet away from the mud cooler is an 84-inch steam turbine type fan or "bug blower" which is played on the mud as it sprays down from the slotted pipe. This fan aids materially in reducing the temperature.

### Mud Pit Arrangement

Figure 2 illustrates the arrangement of troughs which carry the mud from the flow line, through the shale shaker and to the mud cooler. View was taken from high in the derrick, looking down on the pits.

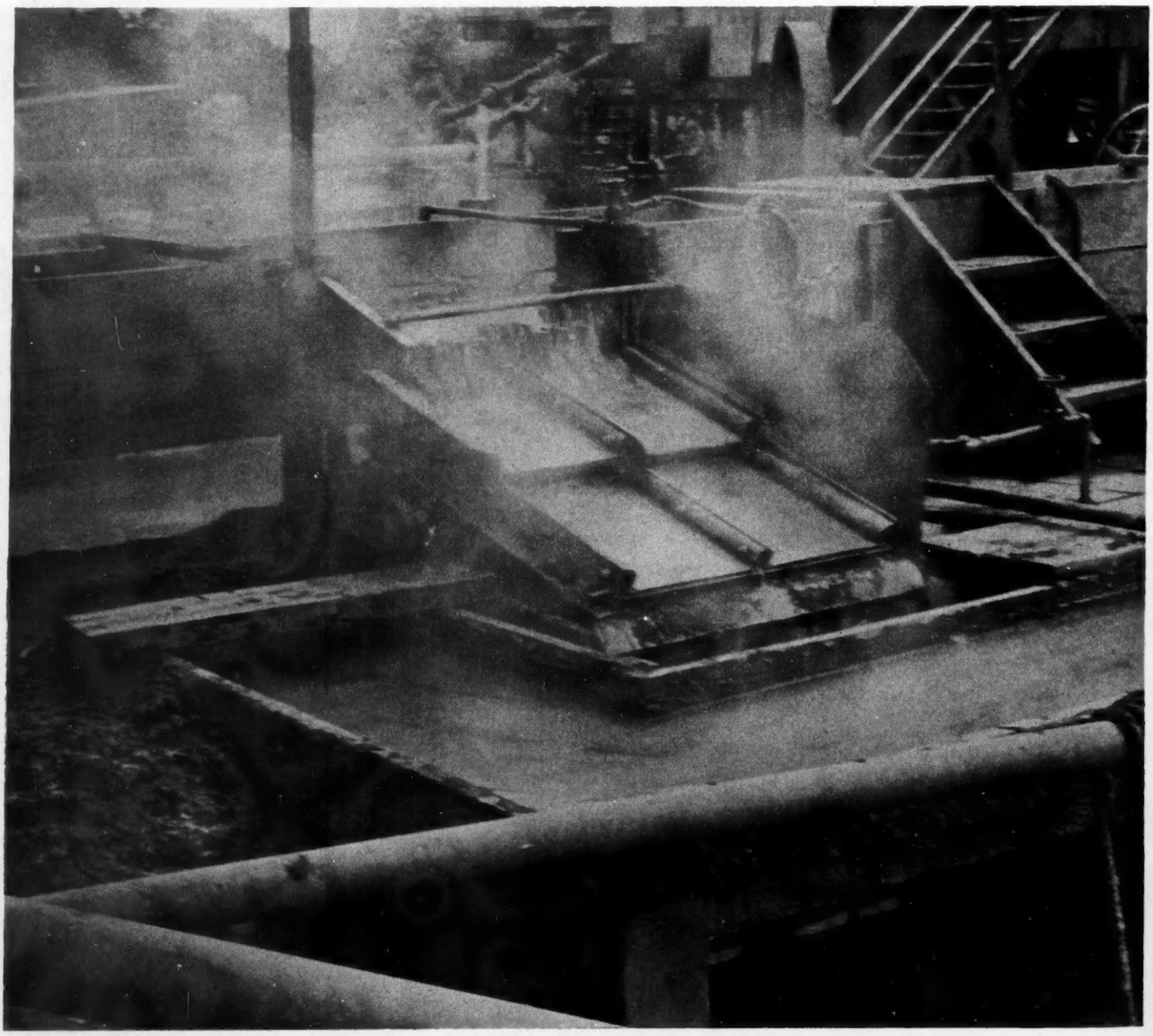
As can be seen in Figure 2, the slush pit immediately below the mud cooler is divided into two parts by a low partition over which the mud cascades into the suction pit. This arrangement of dropping the mud over a partition also aids in cooling it.

While Frazier did not record the higher temperatures at his well, temperatures around 200° F. are common in the Anderson County area. In the Cayuga field, about 10 miles from Gage 1, recorded temperatures were 218° F. in the drilling mud at the surface in the Tidewater Associated Oil Company and Seaboard Oil Company's Wills 21-A. At that time Wills 21-A was drilling at 8500 feet. The highest temperature recorded in the drilling mud at Gage 1 was 122° F., the mud cooler holding the temperature to this safe working degree. Figure 3 shows steam rising from hot mud in the shale shaker on Gage 1.

The fact that a mud cooler is an economic, as well as a mechanical, necessity when drilling in high temperature areas is obvious when the damage done to parts of the drilling equipment alone is considered.

**FIGURE 3**

**Steam rising from hot mud in the vibrating screen at Gage 1.**



# MEN IN THE INDUSTRY'S NEWS

**E. HOLLEY POE,** of Tulsa, Oklahoma, has been appointed secretary of the Natural Gas Department of the American Gas Association, succeeding Captain A. E. Higgins, of Dallas, Texas, who resigned to become vice-president of Pittsburgh Equitable Meter Company, Pittsburgh, Pa., it was announced today at the annual convention of the department. The office of the Natural Gas Department will continue to be in the Dallas Gas Building, Dallas, Texas, and Poe will make his headquarters there. A native of Oklahoma, Poe has had a varied career in the natural gas and oil industries, including considerable operating experience. Educated in the public schools of Tulsa and Morgan School, Fayetteville, Tenn., he spent his summer vacation periods working in the oil and gas fields as a roustabout. After preparatory school he studied law for two years in the office of his father. During this period he looked after insurance adjustments, commercial matters, brief work, tax matters and accounting.

Following this, Poe was employed by Slick Oil Company in various office capacities until January 1, 1916, when this company was sold to The Sinclair Oil Company. At that time he became engaged in business for himself and built and sold several gasoline plants. On September 1, 1918, he joined Tidal Oil Company, where he worked under C. E. Hane, then vice-president and secretary-treasurer of that company.

In June, 1920, he joined several associates in the organization of Wooster Oil Company, Henryetta Gas Company and Tiger Mountain Oil Company, with headquarters in Tulsa, Oklahoma. Poe stayed with this group until September, 1927 when the gas producing, transportation and distribution properties of these companies were purchased by Central States Power and Light Corporation, Tulsa. With the sale of these properties, he joined the Central States organization, being employed for the past few years in various capacities including operations, property acquisition, preliminary appraisals, public policy and other general executive duties.

**PAUL HUBBARD**

**HILLARD W. CAREY** was a guest of the Tulsa Geological Society on May 17. He discussed Bagwell 1, a 6000-foot test being drilled by Erle P. Halliburton, Inc., in Pushmataha County, Oklahoma. Carey was recently transferred from Halliburton Oil Producing Company at Houston, to Erle P. Halliburton, Inc., Antlers, Oklahoma, to record the geology of of the Pushmataha County test.

**DON R. KNOWLTON,** general superintendent, Phillips Petroleum Company, Bartlesville, Oklahoma, has been a recent business vistor in Fort Worth and Corpus Christi.

**W. A. MALEY** has been appointed division geologist for Humble Oil & Refining Company at Corpus Christi, Texas, replacing W. K. Esgen, resigned.

**H. G. OFFIER,** general superintendent of the land department of Amerada Petroleum Corporation, Tulsa, died May 18. He was returning from a business trip to the West Coast, when stricken with pneumonia at Carmel, California.

**ERIC FURNIVAL GRIFFIN,** Sydney, New South Wales, Australia, has been appointed managing director of Oil Search Limited, succeeding E. L. Walter, deceased, according to word received from Noel Walker, secretary of the company.

**J. J. FROMMER,** division superintendent in the Oklahoma City area for Ohio Oil Company, will go to Houston, Texas, as of June 1, where he will be general superintendent of production of the new Texas division of the company.

**J. E. CARR** has been appointed division land man, temporarily, for Humble Oil & Refining Company at Corpus Christi, Texas, replacing L. D. Manry, resigned.

## Gulf Coast vs. West Texas

### No Proration on This

**Here are two assistant superintendents of Gulf Oil Corporation and the results of their operations when no proration applies. Standing in the surf is Paul Hubbard, assistant superintendent Gulf at Houston. On the boat is T. W. Rowe, assistant superintendent Gulf, Ft. Worth. Hubbard got his redfish at Freeport, Texas, and Rowe got his jackfish at Port Arthur. Both gentlemen have promised a fish dinner to the first ten men who call them up following publication of this sporting item!**

**JAMES H. TRIMBLE,** founder of Western Oil Refining Company, died May 10 at an Indianapolis, Ind., hospital following a long illness. He is survived by his wife, two sons, a daughter and a sister.

**DR. SAMUEL N. BURCHFIELD,** pioneer Pennsylvania oil producer, died May 10 at an Erie hospital following an operation. He was born at Neilltown in 1860, made his home in Titusville and was one of Venango County's best known producers. He practiced medicine in this locality for over half a century. His wife and six children survive.

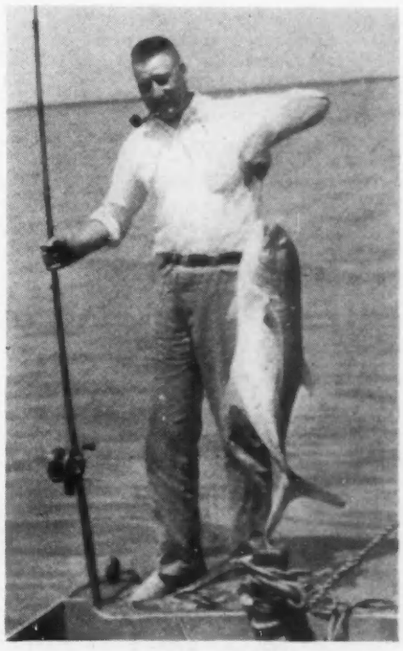
**E. B. WHITEWORTH,** St. Louis oil operator, died May 8 at a Sedan, Kansas, hotel following a short illness. He was 61. Whiteworth had leases near Sedan and spent the last few months there.

**L. E. RAINES** was seriously injured when casing fell on him while working at an oil well near High River, Alberta, Canada. Both legs were badly injured and several fingers were severed.

**W. W. TENNANT,** head of the co-ordination division of Standard Oil Company of Louisiana, stressed the need of technical training in addressing engineering students of Louisiana State University at Baton Rouge recently.

**F. T. NORRIS,** manager of Imperial Oil Company's northern Alberta division with headquarters at Edmonton, is being transferred to Calgary where he will be in charge of the company's southern Alberta district. R. S. Stevens who has been in charge of the southern Alberta district, will take over Norris' post in the northern district.

**THOMAS G. MURPHY,** chief chemist of Franklin Creek Refining Company, Franklin, Pa., discussed "Porocel" and



**T. W. ROWE**

Franklin L. Newcomb, supervising engineer of Standard Oil Development Company, Elizabeth, N. J., spoke on "Corrosion in Cracking Units," at a recent meeting of the Department of Standards and Tests of the National Petroleum Association at Warren, Pa.

**DR. CECIL L. BROWN,** director of development and research of Standard Oil Company of Louisiana, addressed the May meeting of the Louisiana section of the American Chemical Society at Baton Rouge recently.

**J. J. MURRAY,** general manager of marine affairs for Associated Oil Company and a veteran port shipping executive, recently was elected president of the Bilge Club, Southern California's largest organization of shipping men. Oil men on the organization's board of directors are J. O. Woll, General Petroleum Company, and A. R. Pegg, Union Oil Company.

**JOSEPH E. MOOREHEAD,** executive secretary of Pennsylvania Grade Crude Oil Association, has been named president of the Oil City Rotary Club.

**FRANK O. PRIOR,** president of Stanolind Oil & Gas Company, has been elected a member of the executive committee of the International Petroleum Exposition.

**A. R. DENNISON,** chief geologist, Amerada Petroleum Corporation, Fort Worth, was in Houston recently.

**STUART SHERAR, W. K. ESGEN** and **L. V.MANRY,** all formerly with Humble Oil & Refining Company, have formed Trinity Petroleum Company, which will operate in the Gulf Coast and Southwest Texas.

**C. H. ELLINGWOOD** and **F. S. SMITH,** both of New York City, and E. W. Chase, Fred Fair and A. W. Scott, all of Oil City, Pennsylvania, were reelected directors of Wolverine-Empire Refining Company at the annual meeting held in Oil City recently. Directors reelected the following officers: Ellingwood, chairman of the board; Chase, president; Scott, vice president and secretary, and F. W. Baer, New York, vice president and treasurer.

**E. L. SCHWARTZ,** division office manager of Gulf Oil Corporation, has been elected president of the Philadelphia chapter of the National Office Management Association.

**HOWARD S. CHRISTMAN,** sales manager of Philadelphia Gas Works Company, was named president of the Pennsylvania Gas Association at the annual convention at Sky Top recently. Other officers named are: E. S. Mensch, Williamsport; L. B. Eichengreen, Philadelphia, and M. A. Boylan, Scranton, vice presidents; F. W. Lesley, York, secretary, and W. G. Sterrett, Philadelphia, treasurer.

## JOHN AND DAVID CRAWFORD RECEIVE TOKENS OF ESTEEM ON PARKERSBURG'S FORTIETH ANNIVERSARY

TOGETHER THEY HAVE SERVED INDUSTRY ALMOST 100 YEARS

IN THE United States immigrant list for 1883 appeared the name of John McLenaghan Crawford of Limavady, County Derry, Ireland. Shortly after the ship docked he headed for Bradford, Pennsylvania. Three years later, in 1886, the list mentioned David B. Crawford of Limavady, County Derry, Ireland. He, too, headed immediately for Bradford. The passports showed John was born in 1867 and David in 1872.

With the luck and the pluck of the Irish they found employment in the Bovaird & Seyfang Supply Company, one of the pioneer oil supply companies, working in hope of proving one of the older brother's pet theories: that the oil industry would always offer plenty of opportunities for every man who wants to go places and who isn't afraid of work.

The theory panned out. Forty years ago on April 30 John founded The Parkersburg Rig & Reel Company. Today he is chairman of the board. It has since grown to be a very large organization. The theory was practical for David also. He occupies the president's chair in the company.

It is probable that the two class among their most cherished possessions the loving cups presented them as a surprise April 30 by Casper A. Ruf, vice president and general manager, and Bernard M. Farson, secretary and treasurer, as tokens of the loyalty and affection of their employees. The ceremony was attended by plant foremen and department heads from the general offices.

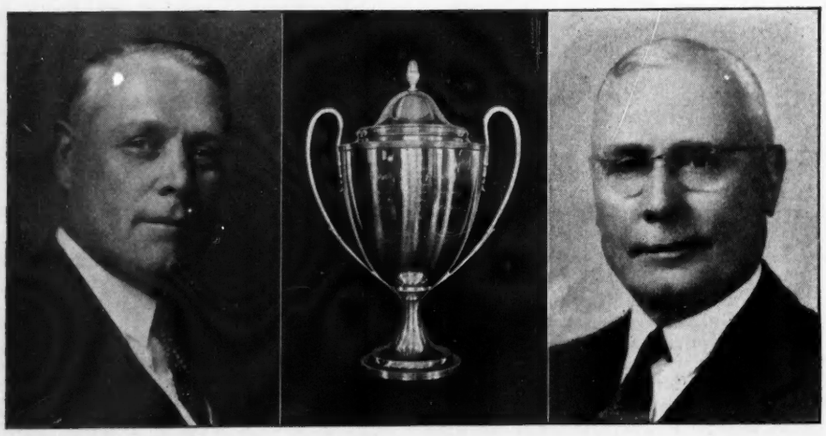
John started out with Bovaird & Seyfang as an apprentice in the machine shops. It is not known whether Bovaird & Seyfang were motivated by a desire to cash in on the affability and good-natured blarneying supposed to be the natural heritage of a son of old Ireland, but they soon put him on the outside as a field salesman covering Pennsylvania, West Virginia and Ohio.

David's early experience was somewhat parallel. They started him out as a bookkeeper, then shifted him over to managership of Bovaird & Seyfang's store at McDonald, Pennsylvania, before putting him, too, in the field as a salesman. Finally David became manager of their Scio store in Ohio.

In 1893 John left Bovaird & Seyfang for Washington, Pennsylvania, to become a field salesman for William Forgie, manufacturer of rig irons. After four years with Forgie he went to Parkersburg, West Virginia, and founded The Parkersburg Rig & Reel Company in 1897, taking the office of secretry and treasurer as a starter. Two years later he needed David's help, so David resigned from Bovaird & Seyfang in 1899 to join John in building the new company. David was made secretary and treasurer of the organization in 1914, a position he held until his appointment as president in 1936. The Crawford brothers have not been content to tie themselves down to the supply end of the oil business. David has been associated with the producing end of the oil business and has at various times been a director of several different oil companies. John has at various times served as president of the following producing and refining companies: North Fork Oil Company, Muskogee Refining Company, Sperry Oil & Gas Company, Oklahoma Producing & Refining Company, Quartet Oil Company, Hillside Oil Company, and Homa-Okla Oil Company.

In addition to John's having served as a director of the American Petroleum Institute, he has been actively identified with a number of civic, political, educational and industrial movements. He still believes that the oil industry is the greatest and most interesting business in the world.

### THE CRAWFORDS OF PARKERSBURG



**DAVID B.** **JOHN M.**

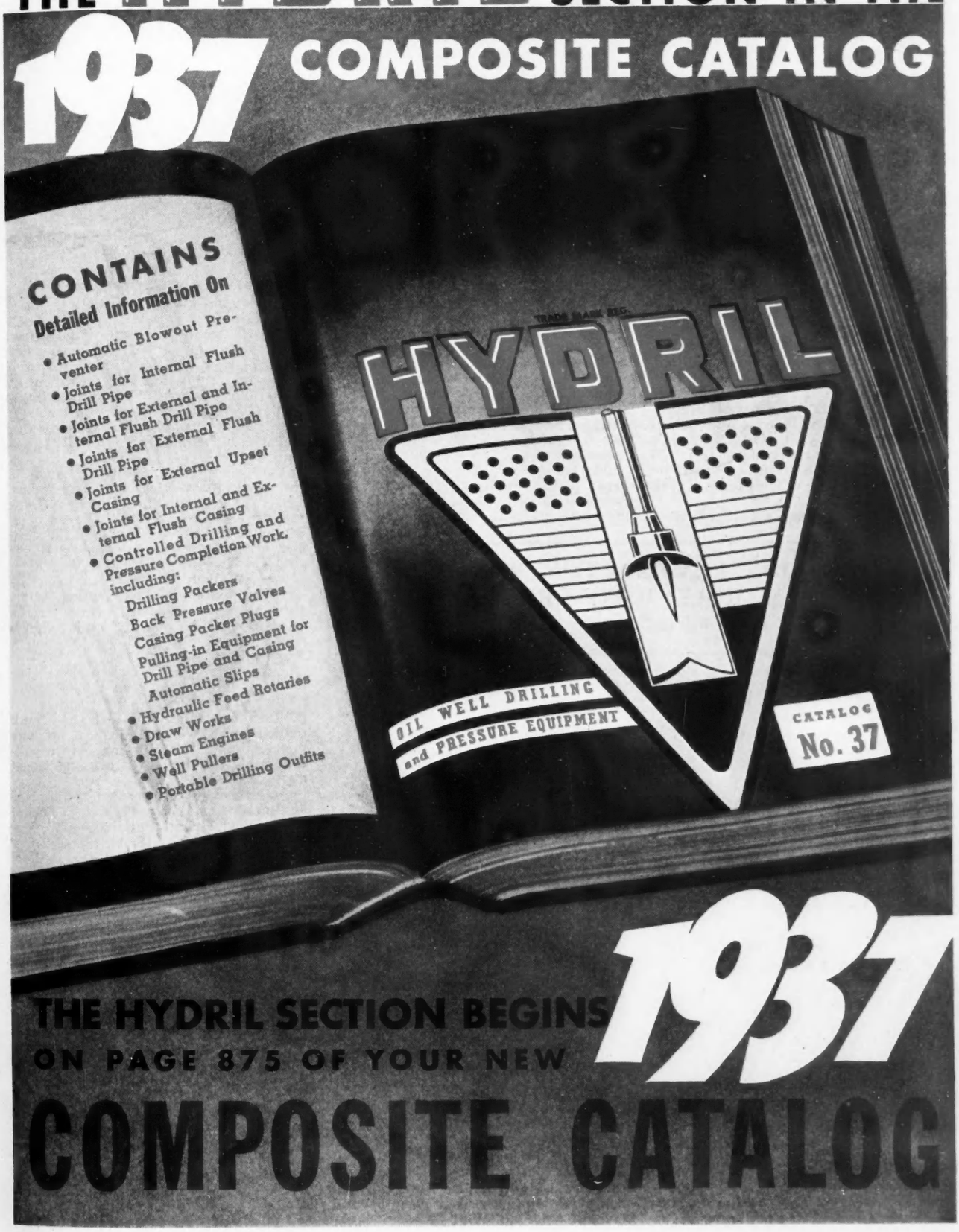
**— AND BETWEEN THEM —**

**One of the two cups given David and John as tokens of the loyalty and affection of their employees, a gesture made in commemoration of the fortieth anniversary of The Parkersburg Rig & Reel Company**

**E. H. McLEOD,** Calgary, was elected president of New Valley Oils, Limited, at the annual meeting of the company at Calgary, Alberta, last week. Other officers are P. J. Timms, vice president; A. L. Stevens, secretary-treasurer, and F. F. Jessie, H. A. Horstman and A. W. McLeod, directors.

# LARGER THAN EVER...

## THE HYDRIL SECTION IN THE 1937 COMPOSITE CATALOG


CONTAINS
Detailed Information On
• Automatic Blowout Preventer
• Joints for Internal Flush Drill Pipe
• Joints for External and Internal Flush Drill Pipe
• Joints for External Flush Drill Pipe
• Joints for External Upset Casing
• Joints for Internal and External Flush Casing
• Controlled Drilling and Pressure Completion Work, including:
Drilling Packers
Back Pressure Valves
Casing Packer Plugs
Pulling-in Equipment for Drill Pipe and Casing
Automatic Slips
• Hydraulic Feed Rotaries
• Draw Works
• Steam Engines
• Well Pullers
• Portable Drilling Outfits
TRADE MARK REG.
HYDRIL
OIL WELL DRILLING
and PRESSURE EQUIPMENT
CATALOG
No. 37

## THE HYDRIL SECTION BEGINS ON PAGE 875 OF YOUR NEW 1937 COMPOSITE CATALOG

# WORLD DEVELOPMENT and TECHNOLOGY

Edited by
WM. V. GROSS, Associate Editor

# *New Flank Wildcat*

## 40 TESTS ARE SCHEDULED TO SPUD IN TURNER VALLEY SOON

BROWN Oil Corporation, Limited, will test the central west flank of Turner Valley, Alberta, Canada, on either Legal Subdivision 1 or 15, of Section 19, about half a mile east and half a mile south of Royalite Oil Company's Dalhousie 8, which thus far has failed to obtain successful results. It will be the third Turner Valley test of the Brown Company.

As the week closed, 28 Turner Valley wells were drilling, two were being placed on production and 40 were scheduled for early spudding. Reports from 20 Alberta locations outside the Turner Valley field showed 14 active, two testing test, two about to spud and three idle.

At Dalhousie 8, cleaning was in progress preparatory to testing the Dalhousie sands. The test failed of commercial production in the limestone and was subsequently shot with 1000 quarts of nitroglycerine. The hole bridged over a few hundred feet from the bottom and the drill stem twisted off. Location is in Legal Subdivision 6, Section 30, Township 19.

### Bailing on Pincher Creek

Efforts are still being made to boost production at Newfold Royalties, Ltd.'s test in the extreme south of the valley. With tubing in, the well produced about 20 barrels of naphtha with a gravity of 68 degrees following acid treatment. A shot of 650 quarts of nitroglycerine is to be administered in an effort to further increase production. Location is Legal Subdivision 11, Section 21, Township 18.

The week brought little change in the situation at Weymarn Petroleums, Ltd.'s wildcat on the Pincher Creek structure. Amber crude, believed coming from an upper strata of the Dalhousie sands, is being bailed in efforts to bring it into production. A cement plug, installed at 4660 feet when a cave-in took place, is to be drilled through. The main producing horizon is believed to be below the plug. Location is Legal Subdivision 5, Section 7, Township 6.

Efforts were still being made to shut off sulphur water at Arca Development Company's wildcat on the High River-Aldersyde structure, which had been drilled to 8988 feet, deepest of any test in the British Empire. before pulling back to the Dalhousie sands at about 8600 feet.

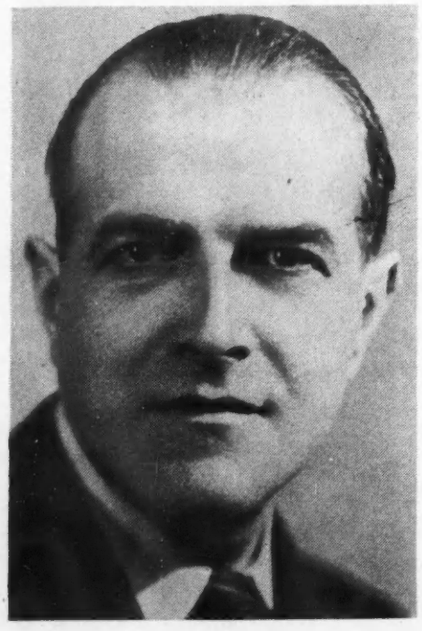
An unusual development took place at Sunset Oil Company, Ltd.'s Turner Valley test, Legal Subdivision 7, Section 20, Township 18, where a heavy gas showing was made at the shallow depth of 1080 feet. No gas showing has previously been reported in this horizon at any other valley well. Drilling was in progress below 1282 feet as the week closed.

### Many Active In Field

The situation at other active Turner Valley wells as the week closed follows: Brown Oil Corporation's No. 1, drilling at 2540 feet; No. 2 drilling at 2570 feet; Commoil's drilling at 2902 feet; Davies Petroleum's No. 1, drilling at 1607 feet; No. 2 drilling at 3034 feet; Firestone Petroleum's drilling at 1497 feet; Four Star Petroleums' 1071 feet; Globe Oil Company, drilling at 1235 feet; Granville Oil Company, drilling at 3053 feet; Mercury Royalties, changing rig at 2820 feet; Mercury Oils' No. 8, changing rig at 2755 feet; Model-Spooner-Reward Royalties, drilling at 1041 feet; Monarch Royalties,

### SECTION LEADERS FOR WORLD PETROLEUM CONGRESS

**Paris, France — June 14-19**



**M. L. CHOVE**

**Will head the section devoted to materials and construction. He is the director of technical services for Societe Anonyme des Petroles Jupiter.**

**H. de CIZANCOURT**

**Chief geologist of Compagnie Francaise des Petroles, will act as vice chairman of the section devoted to geology and drilling.**

## YOU CAN DEPEND ON *PITTSBURGH SEAMLESS*

Users of steel tubular products are apt to take the dependability of PITTSBURGH SEAMLESS for granted. Occasionally, however, there comes an emergency in which PITTSBURGH'S extra margin of safety is demonstrated with startling clearness. Such demonstrations are not amazing to the engineers and metallurgists of the PITTSBURGH organization, since they are fully aware of the inherent strength and flawlessness of PITTSBURGH SEAMLESS tubular products. Makers of PITTSBURGH SEAMLESS are, remember, specialists of great skill and long years of experience in the manufacture of steel and seamless steel tubular products.

**PITTSBURGH STEEL COMPANY · PITTSBURGH, PA.**

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**DRILL PIPE · CASING · LINE PIPE**
**OIL WELL TUBING**

*THERE IS NOTHING SUPERIOR TO SEAMLESS*

drilling at 4996 feet; National Petroleum Corporation's No. 1, drilling at 120 feet; No. 2, drilling at 928 feet; North American Petroleums, spudding; Phillips Petroleum, drilling at 2450 feet; Prairie Royalties, drilling at 2825 feet; Richland Oil Company's No. 1, drilling at 2412 feet; No. 2, drilling at 3807 feet; No. 3, drilling at 5475 feet; Rich-Well No. 1, drilling at 150 feet; Royal Crest Petroleums, drilling at 2253 feet; Share Royalties, drilling at 2852 feet; Royalite Oil Company's Sterling-Pacific No. 5, drilling at 4205 feet; Sunburst Oils, drilling at 1806 feet; Three Point Petroleums, drilling at 1430 feet.

### Other Areas Busy

The status of wells on other West Canadian structures follows: on Birch Ridge, Elbow is drilling at 5090 feet; on Calling Valley, Sentinel resuming at 5850 feet; on Cardston, Franco Oils is fishing at 4583 feet; on De Winton, Marquis Oil Company is resuming at 4500 feet; on Duncan, Spindletop Oils is drilling at 540 feet; on Highwood Sinclair, Canadian Royalties is drilling at 2775 feet and South End is cleaning at 4525 feet; on Hunter Valley, Hunter Valley Oil Company is drilling at 7511 feet; on Kootenay Dome, Roxana Petroleums is drilling at 2716 feet; on Lethbridge, Lethbridge Petroleums is about to spud; on Moose Dome, Moose Oils is resuming at 725 feet; on New Valley, New Valley No. 1 is drilling at 7302 feet; on Pincher Creek, Weymarn Petroleums' wildcat is testing at 5960 feet; on Pekisko, Pekisko Hills is idle at 4400 feet; on Taber, Plains Petroleum Corporation's No. 2 has derrick up; on Twin River, Del Bonita Associated Oils is rigging at 3990 feet; on Waterton, Oil City is drilling at 2565 feet; on Watson Mar-Jon Oil Company and Maxmount are drilling, no depth reported; on Wainwright, London Ribstone Petroleums' No. 1 is drilling at 2435 feet, No. 2 is drilling at 2222 feet.

Imperial Oil Company and British American Oil Company purchased more than a half million barrels of crude oil and naphtha from Turner Valley oil companies during the first four months of 1937, a gain of more than 60 percent over the corresponding period of last year. April marketings totaled 94,035 barrels of crude oil and 55,432 barrels of naphtha, for a monthly total of 149,467 barrels, compared with 133,216 barrels in March and 76,615 barrels in April, 1936.

Following are the oil sales, in barrels of 35 gallons, for the first four months of 1937 and the corresponding period of 1936:

| | 1937 | 1936 |
|---|---|---|
| January | 101,856 | 79,127 |
| February | 115,818 | 74,146 |
| March | 133,216 | 76,687 |
| April | 149,467 | 76,615 |
| Total | 500,357 | 306,575 |

## YUGOSLAVIA SEARCH

During the past four years Yugoslavian prospects have been subjected to considerable exploratory drilling without very encouraging results, and the search has narrowed down to where there is only one private company active as such, most of the current prospecting being done by the government through drilling contractors.

The last well completed in Yugoslavia was abandoned at 5573 feet without having encountered showings of importance.

# *Russia Advances*

## NEW RESERVES, TECHNICAL PROGRESS CITED BY GUBKIN

RUSSIA is perhaps more advanced in production and drilling technique than she is generally given credit for, if statements contained in Academician I. M. Gubkin's article in a recent issue of the Economic Survey of U.S.S.R. can be taken as criteria.

Some of the statements in this article follow in extract form.

"When the (Soviet) oil industry first began to develop machine tools, machinery, pumps, and tools for drilling and production were imported from abroad. They are now made in Soviet factories, and the latter are in a position to satisfy all the needs of the oil fields, both as regards drilling equipment and production plant.

### Rigs Up to Date

"Drilling machines previously in use have been brought up to date by being made automatic in action and by the mechanization of lifting and lowering operations.

"A new system for regulating the automatic delivery of drill bits has been introduced which is an improvement on the invention of Soviet Engineer Skvortsov.

"In Baku a new design for the building of foundations under derricks and equipment of the latter over water has been worked out which obviates the necessity of filling up or employing expensive and complex constructions."

After studying causes of well collapse, "a mixture of chemical reagents has been devised for cementing the walls of the wells.

"A more efficient regime has been introduced for the work of mud pumps, and this has led to a sharp rise in the output and pressure of the pumps.

"Clay drilling has also been thoroughly organized by centralizing the preparation of solvents in special clay works and laying special mud pipes to the scene of drilling operations.

"During 1935 the time spent in actual drilling (on an average for the whole Union) amounted to 28 percent of the total time taken to drill a well, but now the figure has been raised to 60 or 70 percent.

### Reserves Sharply Increased

"On January 1, 1935, the reserves of petroleum amounted to 3,200,000,000 tons (about 22,400,000,000 barrels), which represents an increase of 114 percent over 1932. This figure includes all the reserves of areas at present being prospected and of areas where thorough-going industrial prospecting work may be carried out. The latter—so-called geological reserves—amount to 84 percent of the total figure.

"Formerly, by far the greater part of the petroleum produced (in Russia) came from the Azerbaijan oil fields, but at the beginning of the Third Five Year Plan petroleum from the Baku districts will only make up 68 percent, and at the end of the period, 58 percent of the total production. The share of the Eastern districts in total production will amount to 9.2 percent by the end of the Third Five Year Plan. A movement will take place in the sources of supply, and production will be concentrated in new fields and newly opened wells.

### Other Areas to Assume Importance

"Thus, while Baku deposits will continue to give a large and increasing output of petroleum, the relative importance of the new districts, whose prospects are growing from year to year, will tend to increase.

"It must also be observed that the oil reserves referred to, which were calculated on January 1, 1935, leave entirely out of account the prospects of oil production in a large number of new regions and districts of the U.S.S.R. where, during recent years, in the course of provisional prospecting work, either indications of oil bearing sands have been detected or the rock formation is of a kind favorable to the accumulation of petroleum. There are districts coming under this category in Siberia, Kamchatka, the Ukraine, the Stalingrad Samara areas, and in the Moscow and Leningrad regions."

### Siberia Has Promising Districts

Speaking of Siberia, Gubkin says, "Here indications of oil bearing sands have already been detected in the following districts: (1) on the eastern slopes of the Urals by the Rivers Belaya and Yugan, (2) by the Rivers Tolba and Amga in the Aldan districts, (3) on the northeast coast of Lake Baikal by the Angara River, (4) at Nordvic Cape beyond the Arctic circle."

## MEXICO YIELD UP

Petroleum production in Mexico continued on the upward trend in March, it is indicated by the estimate of 4,307,945 barrels for that month by the ministry of national economy. The production in the corresponding month of last year was 3,542,365 barrels. The ministry rectifies February's production at 3,922,929 barrels.

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With cancellation by the Mexican ministry of national economy of the concession held by the Sociedad Mercantil Dominguez Hermanos, 4400 hectares of oil lands in San Rafael Balantauche municipality, Campeche state, have been incorporated in the federal petroleum reserves.

# *Outlook Is Better*

## LITTLE CHANGE IN MARKETS BUT PROSPECTS IMPROVED

MARKETS have undergone but slight change within the past week, and prices are mostly at the same levels that have prevailed for several weeks.

Prospects have been improved somewhat through indications that crude oil production will be better controlled in June under more strict allowables of the leading producing states.

However, the output of the wells lately has been running far above the market requirement, and there remains some doubt whether the excesses will be eliminated even under the contemplated stricter allowables.

In the 14 weeks prior to May 1 the crude production was excessive to such extent as to result in running over 18,000,000 barrels of crude to storage, even though refinery operations were somewhat excessive. (The gasoline inventories were built up to an all-time peak that was not entirely justified.)

### Proration Plans Encouraging

Nevertheless, the movement toward a more effective balancing of crude production with market demand in June apparently will have the earnest cooperation of most of the leading producing states, and this concerted effort naturally is encouraging and a stimulant for the markets.

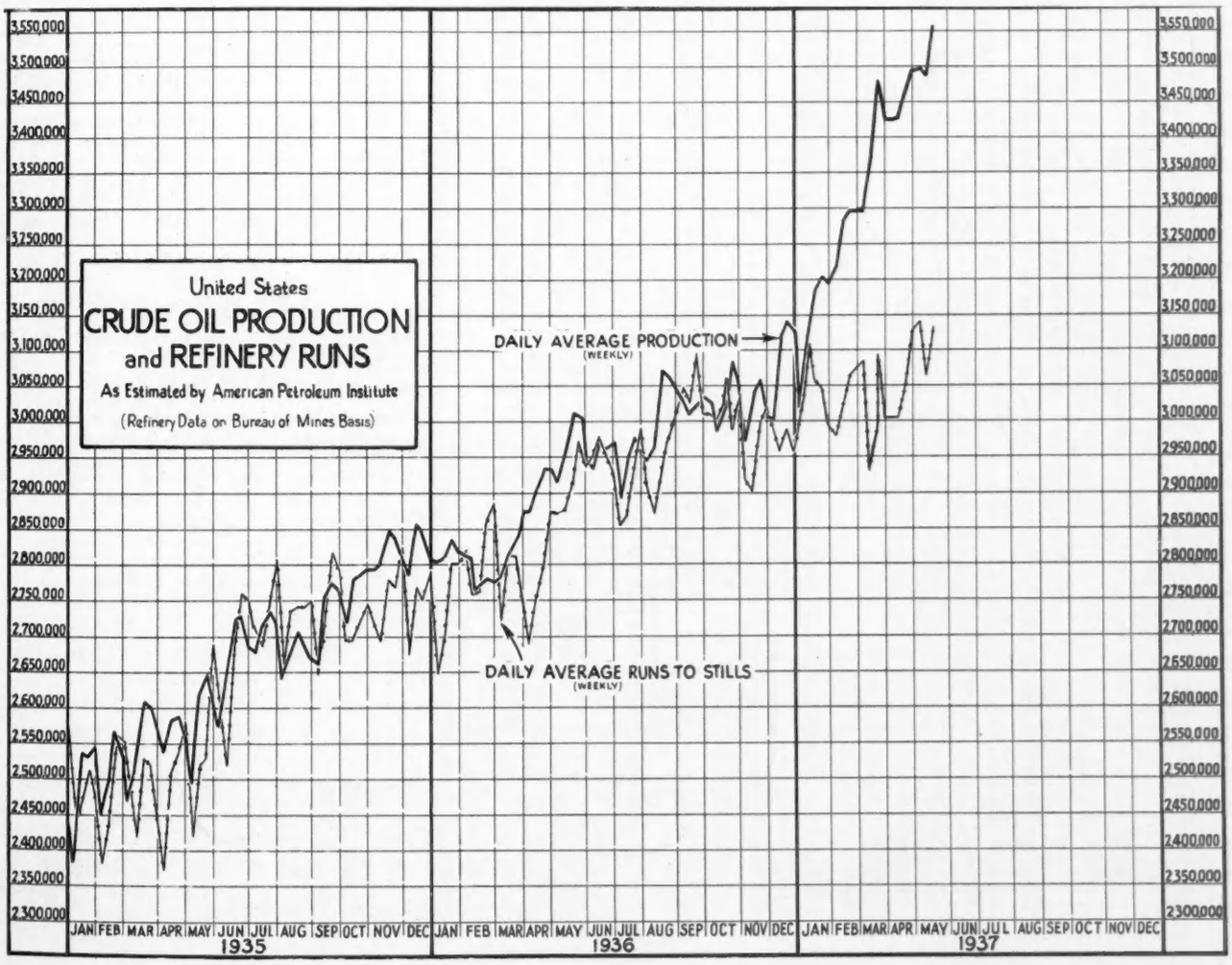
In view of these indications of an impending improvement in crude control, there has been already some revival of hopes for higher crude oil prices this summer. It is felt that if additions to storage were eliminated, a moderate advance in crude prices and accompanying increases in refined oil prices might reasonably be hoped for.

### Stricter Texas Allowables

Contributing much toward the better outlook in crude control was the action of the Texas Railroad Commission last week, prescribing a state allowable as of June 1 that conforms closely with the Bureau of Mines forecast of market demand for Texas crude.

Oklahoma, Kansas, and Louisiana are adhering to the Bureau of Mines recommendations even in May, and they are expected to continue doing so in June, particularly in view of the strict program contemplated by Texas.

California and New Mexico, the other two of the six leading producing states, have not been holding production in line with the federal bureau's recom-



mendations, and consequently it appears doubtful if they will do so in June.

### Output High Lately

The high production rates that have prevailed lately have constituted all-time records, and they have been above the market demand, even though oil consumption has been running at the highest levels in history.

Similarly, refinery operations have been exceptionally heavy, running around the highest levels on record. The crude runs of 3,135,000 barrels daily for the week ended May 15, as reported by the American Petroleum Institute, were within 5000 barrels of the all-time peak established in the week ended May 1.

### Gasoline Stocks Down

Some further progress was made in the week ended May 15 in cutting down gasoline inventories, total stocks having been reduced approximately 1,000,000 barrels. However, the total inventories of finished and unfinished gasoline still stood at 80,378,000 barrels, or only about 3,000,000 barrels under the all-time peak that was reached March 27. The total of 80,378,000 barrels on hand May 15 was about 11 percent greater than the 72,490,000 barrels held one year previously. This 11 percent gain in gasoline stocks was not entirely justified, as gasoline demand lately has been running only from 9 to 10 percent higher than for the corresponding time last year.

**CRUDE PRICES**

**Complete table of prices paid for crude oil at the well in principal fields will be found on page 134 of The OIL WEEKLY, May 3. Hereafter this Schedule will appear only in the first issue of each month except when changes are announced.**

### California Market

Although there was some talk last week about the possibility of higher crude oil prices in California, the opinion prevailed in most quarters that higher prices could not reasonably be expected soon, since crude production in the state has been running about 50,000 barrels a day over the accepted allowable. The daily average production is running close to 654,000 barrels, compared with an allowable of 602,330 barrels a day.

Production in the Wilmington field May 13 was slightly over 36,000 barrels a day, compared with less than 10,000 barrels daily in the latter part of March. There is no official posted price for Wilmington crude, which is a low gravity oil and which has a fairly high sulphur content. The going price there is supposed to be 80 cents a barrel. But there are no regular pipe line connections. In many instances, this crude is selling on spot delivery at 60 cents a barrel, or sometimes slightly less. It is being moved out in tank cars, trucks, and trailers. Rumors continue that a major pipe line company plans an early extension of its present trunk lines, running to various points at the harbor, but so far this rumor has not been verified. No pipe line is serving the field as yet, however.

### Based on Fuel Oil

Rumors of a possible increase in California crude prices appeared to be based largely on the action of Standard Oil Company of California in advancing its regular posted price for fuel oil from 95 cents to $1.10 a barrel, effective May 17. As of the same date, that company also increased its posted price on Diesel engine oil from $1.35 to $1.65 a barrel on the West Coast.

The going price of gasoline on the Pacific Coast remains steady, with little actual price cutting. In some instances small stations with limited gallonage are retailing motor fuel at from 3 to 4 cents under the regular going price, but the total gallonage moving at the low figures is almost negligible. Apparent, the more important companies, both majors and larger independents, have decided to maintain their regular prices irrespective of this unimportant price-cutting.

At least 50 to 60 more wells are to be completed at Wilmington during the coming two months. Daily production

## Weekly Trends of United States Production and Stocks

**(Figures American Petroleum Institute, except crude stocks, Bureau of Mines)**

| WEEK ENDED— | Crude Oil Production Barrels Daily) | Crude Runs to Stills (Barrels Daily) | Crude Oil Stocks (Barrels) | Gasoline Stocks (Barrels) | Gas & Fuel Oil Stock (Barrels) |
|---|---|---|---|---|---|
| January 2, 1937 | 3,121,400 | 3,030,000 | 287,659,000 | 62,661,000 | 106,330,000 |
| January 9 | 3,117,800 | 3,110,000 | 286,912,000 | 65,402,000 | 105,971,000 |
| January 16 | 3,184,650 | 3,045,000 | 286,044,000 | 66,559,000 | 104,841,000 |
| January 23 | 3,205,150 | 3,055,000 | 285,211,000 | 68,180,000 | 103,441,000 |
| January 30 | 3,194,050 | 2,995,000 | 285,384,000 | 69,540,000 | 102,078,000 |
| February 6 | 3,220,750 | 2,980,000 | 286,116,000 | 70,535,000 | 101,136,000 |
| February 13 | 3,286,050 | 3,020,000 | 286,158,000 | 73,585,000 | 100,735,000 |
| February 20 | 3,295,950 | 3,065,000 | 287,574,000 | 74,798,000 | 99,391,000 |
| February 27 | 3,296,100 | 3,085,000 | 288,121,000 | 78,786,000 | 99,534,000 |
| March 6 | 3,298,800 | 2,930,000 | 289,611,000 | 80,102,000 | 99,115,000 |
| March 13 | 3,372,850 | 2,985,000 | 290,613,000 | 81,236,000 | 98,964,000 |
| March 20 | 3,448,150 | 3,095,000 | 291,555,000 | 81,623,000 | 97,287,000 |
| March 27 | 3,431,300 | 3,060,000 | 293,587,000 | *83,538,000 | 96,591,000 |
| April 3 | 3,422,350 | 3,005,000 | 297,374,000 | 83,157,000 | 95,805,000 |
| April 10 | 3,426,300 | 3,005,000 | 297,468,000 | 82,579,000 | 94,581,000 |
| April 17 | 3,463,550 | 3,055,000 | 298,932,000 | 82,703,000 | 94,472,000 |
| April 24 | 3,496,400 | 3,125,000 | 300,737,000 | 82,303,000 | 94,100,000 |
| May 1 | 3,497,450 | *3,140,000 | 303,249,000 | 81,407,000 | 94,291,000 |
| May 8 | 3,489,200 | 3,065,000 | ..... | 81,469,000 | 94,874,000 |
| May 15, 1937 | *3,551,950 | 3,135,000 | ..... | 80,378,000 | 95,316,000 |
| May 16, 1936 | 3,008,050 | 2,920,000 | 315,481,000 | 72,490,000 | 99,120,000 |

*All-time peak.

## Summary of Wells Completed in the United States Week Ending May 22, 1937

| | Completions | Oil Wells | Gas Wells | Failures | Initial Production | Total 1937 | Total this Date, 1936 |
|---|---|---|---|---|---|---|---|
| Alabama | .... | .... | .... | .... | ..... | 1 | 2 |
| Arkansas | 6 | 2 | .... | 4 | 115 | 32 | 36 |
| California | 32 | 27 | .... | 5 | 12,950 | 508 | 424 |
| Colorado | .... | .... | .... | .... | ..... | 6 | 4 |
| Florida | .... | .... | .... | .... | ..... | .... | ..... |
| Illinois | 15 | 7 | 1 | 7 | 288 | 35 | 4 |
| Indiana | 1 | 1 | .... | .... | 20 | 45 | 91 |
| Kansas | 48 | 37 | 1 | 10 | 55,391 | 891 | 590 |
| Kentucky | .... | .... | .... | .... | ..... | 61 | 106 |
| Louisiana | 18 | 15 | .... | 3 | 7,516 | 301 | 400 |
| Michigan | 12 | 5 | 2 | 5 | 4,280 | 315 | 274 |
| Mississippi | .... | .... | .... | .... | ..... | 6 | 2 |
| Montana | 10 | 7 | 2 | 1 | 372 | 48 | 42 |
| Nebraska | .... | .... | .... | .... | ..... | .... | ..... |
| New Mexico | 17 | 17 | .... | .... | 21,464 | 272 | 202 |
| New York | .... | .... | .... | .... | ..... | 4 | ..... |
| Ohio | 22 | 4 | 13 | 5 | 158 | 572 | 764 |
| Oklahoma | 63 | 43 | 4 | 16 | 27,909 | 1,197 | 1,044 |
| Pennsylvania | 4 | 2 | 1 | 1 | 300 | 65 | ..... |
| Texas | 279 | 216 | 12 | 51 | 407,568 | 5,622 | 4,788 |
| Utah | .... | .... | .... | .... | ..... | .... | ..... |
| West Virginia | 19 | 6 | 11 | 2 | 32 | 338 | 284 |
| Wyoming | 3 | 1 | 1 | 1 | 400 | 43 | 17 |
| Total this week | 549 | 390 | 48 | 111 | 538,763 | 10,362 | 9,075 |
| Total last week | 550 | 398 | 30 | 122 | 432,195 | .... | ..... |
| Total this year | 10,362 | 7,095 | 866 | 2,401 | 8,912,244 | .... | ..... |

### Comparison of Permits Granted for New Wells

| STATE | Week Ending May 22 | Total this Mo. | Total this Year | Total this Date Last Year | 1936 Year Total |
|---|---|---|---|---|---|
| Arkansas | ... | 12 | 68 | 42 | 103 |
| California | 40 | 138 | 592 | 358 | 1,054 |
| Louisiana | 50 | 148 | 440 | 493 | 1,107 |
| Kansas | 58 | 264 | 1,022 | 693 | 1,873 |
| Michigan | 27 | 89 | 371 | 258 | 762 |
| Oklahoma | 75 | 297 | 1,185 | 1,195 | 2,594 |
| Texas | 505 | 1,565 | 7,101 | 5,551 | 15,582 |
| Total | 755 | 2,513 | 10,779 | 8,590 | 23,075 |

# *Production High*

## 3,543,900 BARRELS PRODUCED DAILY IN U. S. LAST WEEK

IN the past week, ended May 22, United States crude oil production continued around all-time record levels, averaging 3,543,900 barrels daily.

The continued large output of the wells emphasized the need for stricter control of crude production, which for over 3½ months has been greater than the market requirements, resulting in the running of crude into storage.

However, some relief from the overproduction is in prospect, as Texas proposes to adhere more closely to the Bureau of Mines estimates of market demand during June, while Oklahoma, Kansas, and Louisiana, also among the leading producing states, are expected to make their production fall within the indicated market requirements.

For the remainder of May, moreover, production likely will taper off somewhat, as the trend commonly is downward in the latter portion of each month.

Last week's average daily production was 9150 barrels a day higher than in the previous week, and 211,000 barrels a day above the Bureau of Mines recommendation.

Output was somewhat higher last week for Texas and California, while declines were recorded for Oklahoma, Kansas, Louisiana, and New Mexico.

Texas last week averaged 1,414,100 barrels daily, an increase of 8900 barrels over the previous week's level, and 73,300 barrels a day more than the federal recommendation.

California's production rose 11,000 barrels to an average of 660,000 barrels daily, which was 76,700 barrels a day more than the Bureau of Mines allocation to the state.

Oklahoma showed a decline of 10,925 barrels, in averaging last week 649,725 barrels daily. That was 27,025 barrels daily above the demand.

Kansas output was down 925 barrels to 197,550 barrels daily, which was 10,450 barrels more than the federal bureau's recommendation.

Louisiana averaged 246,500 barrels daily, or 1225 less than in the previous week, and 2900 barrels a day less than the federal allocation.

New Mexico output was down 100 barrels at 113,800 daily, which was 14,000 barrels a day more than the bureau's recommendation.

may exceed 50,000 barrels, but already several of the more important operators are curtailing their production around 25 percent. It may be necessary for them to curtail to a still greater extent, to stave off serious price trouble for the field.

In the Mid-Continent, refinery prices of most products were largely the same late last week as for several weeks previously.

U. S. motor gasoline f.o.b. Oklahoma refineries was moving within a range of 5⅛ to 5¼ cents a gallon for the 62-octane and below, around 5½ cents for the 63 to 67 octane, and 6⅛ to 6¼ cents for the 68 to 70 octane.

### East Texas Crude Raised

**Effective May 22, 1937, Magnolia Petroleum Company raised the price of East Texas crude oil at wells to $1.35 per barrel. This is an increase of 8 cents a barrel over the schedule that has existed in recent months.**

### United States Crude Oil Production

**Estimates Compiled by The OIL WEEKLY**

| DISTRICT OR STATE | Bureau of Mines Recommendation (Daily in May) | ACTUAL PRODUCTION: BARRELS DAILY FOR WEEK ENDING May 22 | May 15 |
|---|---|---|---|
| TEXAS— | | | |
| Texas Panhandle | ..... | 80,400 | 76,200 |
| North Texas | ..... | 71,200 | 70,500 |
| West Central Texas | ..... | 32,800 | 32,700 |
| West Texas | ..... | 208,900 | 208,800 |
| East Central Texas | ..... | 122,100 | 122,300 |
| East Texas Field | ..... | 461,200 | 460,700 |
| South Texas | ..... | 232,900 | 229,600 |
| Texas Gulf Coast | ..... | 204,600 | 204,400 |
| Total Texas | 1,340,800 | 1,414,100 | 1,405,200 |
| OKLAHOMA— | | | |
| Oklahoma City | ..... | 169,525 | 169,700 |
| Seminole Area | ..... | 126,575 | 130,525 |
| Crescent | ..... | 11,374 | 12,900 |
| Lucien | ..... | 14,350 | 14,250 |
| Fitts | ..... | 89,225 | 96,525 |
| Edmund | ..... | 19,650 | 21,000 |
| Moore | ..... | 12,750 | 12,225 |
| Others | ..... | 206,275 | 203,525 |
| Total Oklahoma | 622,700 | 649,725 | 660,650 |
| KANSAS— | | | |
| Ritz-Canton | ..... | 5,100 | 5,475 |
| Chase | ..... | 8,975 | 8,350 |
| Hollow-Nikkel | ..... | 2,475 | 3,675 |
| Sedgwick | ..... | 4,475 | 3,775 |
| Burrton | ..... | 14,100 | 16,300 |
| Lorraine | ..... | 4,650 | 5,675 |
| Russell County | ..... | 31,025 | 31,325 |
| Silica | ..... | 21,450 | 21,000 |
| Others | ..... | 105,300 | 102,900 |
| Total Kansas | 187,100 | 197,550 | 198,475 |
| LOUISIANA— | | | |
| North Louisiana | ..... | 77,200 | 71,525 |
| South Louisiana | ..... | 169,300 | 176,200 |
| Total Louisiana | 249,400 | 246,500 | 247,725 |
| ARKANSAS | 28,500 | 27,125 | 28,000 |
| CALIFORNIA— | | | |
| Long Beach | ..... | 60,000 | 61,000 |
| Santa Fe Springs | ..... | 44,500 | 45,500 |
| Huntington Beach | ..... | 37,500 | 38,000 |
| Dominguez | ..... | 25,500 | 24,500 |
| Inglewood | ..... | 15,500 | 16,000 |
| Ventura Avenue | ..... | 35,500 | 35,500 |
| Seal Beach | ..... | 9,500 | 9,500 |
| Midway-Sunset | ..... | 74,000 | 72,000 |
| Elwood | ..... | 9,000 | 9,000 |
| Kettleman Hills | ..... | 84,500 | 81,500 |
| Mountain View | ..... | 19,500 | 19,500 |
| Playa del Rey | ..... | 9,000 | 9,000 |
| Others | ..... | 236,000 | 228,000 |
| Total California | 583,300 | 660,000 | 649,000 |
| MOUNTAIN STATES— | | | |
| Wyoming | 49,000 | 52,300 | 50,400 |
| Montana | 15,200 | 16,400 | 16,300 |
| Colorado | 4,800 | 4,400 | 4,600 |
| Total Rocky Mountain States | 69,000 | 73,100 | 71,300 |
| NEW MEXICO | 99,800 | 113,800 | 113,900 |
| EASTERN STATES | 117,400 | 116,900 | 115,200 |
| MICHIGAN | 34,900 | 45,100 | 45,300 |
| Total United States | 3,332,900 | 3,543,900 | 3,534,750 |

**IN THE**

# *Financial Field*

***Oil company security markets expected to continue unsteady for several weeks.***

* * *

***Some encouragement is offered by recent crude production control efforts.***

IN CONTRAST with the exceptional strength that they displayed some weeks ago in a generally declining market, oil company securities lately have been largely following the general downward trend.

In financial circles it is generally anticipated that the markets are due to continue unsteady at least for several more weeks.

This expectation seems to be based in large part on the idea that a definite business lull will prevail this summer and perhaps part of the fall.

It is stated that much of the current buying consists of selective purchases by careful investors, having long-pull motives. In some cases, investment trust buying is occurring.

Absence of any pronounced strength in such rallies as have occurred in recent weeks as have many traders and investors to expect that the downward movement will continue. But on the other hand, it is asserted by some that the decline which has already occurred has done much toward discounting any recession in trade that may be impending.

### Oil Industry Outlook

As regards the oil industry, the general opinion was, until recently, that oil companies' profits would prove better than those in other lines. The optimism on the market for the oil companies was based on the unusually high demand for petroleum products this year, the greatest on record; as well as on the industry's generally favorable conditions.

In recent weeks this optimistic view has been replaced by some doubts regarding the industry's earnings power in the months ahead. These doubts have been based largely on the persistent over-production of crude oil. The crude output has been running substantially over the market requirements for 3½ months. In that time the stocks of crude have been increased over 18,000,000 barrels.

### Stricter Control Looms.

Some encouragement has been offered lately, however, in regard to crude production control. The Texas Railroad Commission, following its state-wide hearing last week, prescribed production allowables, effective June 1, that conform with the Bureau of Mines forecast of demand. Texas has been substantially exceeding the market demand, as estimated by the bureau, for several months. Other leading producing states also are expected to adopt comparatively strict allowables for June. The prospects are, of consequently, that beginning June 1, a better balance will be effected between the supply and demand for petroleum.

By now almost all the reports covering first-quarter operations this year have been issued. Several were made available, however, last week.

## *Ohio Oil Company*

The Ohio Oil Company and subsidiaries report for the first three months of 1937 net profit of $3,471,629, after depreciation, depletion, federal income taxes, minority interest, and other charges, equal after the requirements for the preferred stock, to 40 cents a share on the common stock. This compares with net profit of $2,255,139 in the first quarter of 1936, after ordinary charges and taxes, but before federal income taxes. In the first three months of 1935, Ohio Oil Company reported profit of $622,150.

## *Wilcox Oil & Gas Company*

H. F. Wilcox Oil & Gas Company has reported for the first three months of 1937 a net profit of $54,688 after usual charges. This compares with profit of $44,760 in the similar period last year, and with a loss of $35,738 in the first quarter of 1935.

## *Humble Oil & Refining*

Humble Oil & Refining Company last week declared the regular quarterly dividend of 37½ cents a share on the capital stock, payable July 1 to stockholders of record June 1.

## *Bishop Oil Corporation*

Bishop Oil Corporation, of San Francisco, has declared a dividend of 5 cents a share on the 369,900 outstanding shares, payable June 15, to stockholders of record June 1.

At the board of directors' meeting, the following officers of Bishop Oil Corporation were re-elected: Wm. Wallace Mein, president; Louis J. Brunel, vice-president and general manager; J. Tedesco, secretary and treasurer; E. J. Valencia, assistant secretary and treasurer.

The Coast Counties Gas & Electric Company has declared the regular quarterly dividend of $1.50 per share on the first preferred stock of the company, payable June 15.

## *Company Reorganized*

Federal District Judge R. J. McMillan at San Antonio last week approved final negotiations for reorganization of the United North and South Development Company, following two years of litigation.

Edgar B. Davis, will head the new company.

The action of the court last week followed the filing of a final report of J. E. Mowinckle and R. J. Boyle, trustees of the company, who were appointed by the court following initial bankruptcy proceedings filed at San Antonio May 10, 1935.

It was set out in the decree that all properties and assets have been surrendered and delivered by the trustees to the debtor (United North and South Development Company), which now assumes all indebtedness and obligations.

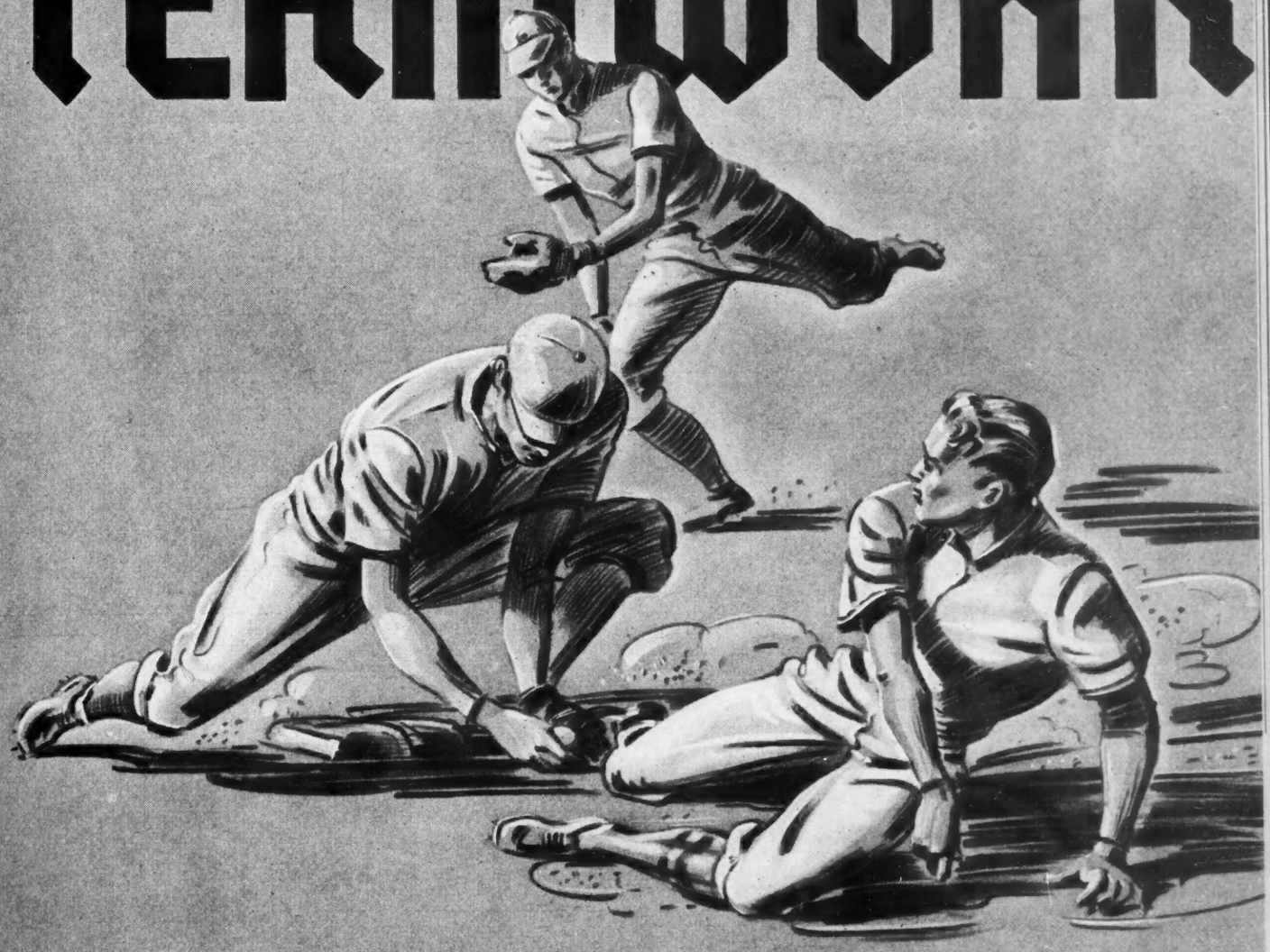
## *Stockholders approve merger of Messer and Oil Valley*

**Olean, N. Y.**—Merger of Messer Oil Company and Oil Valley Producing Corporation was voted here last week by stockholders on the recommendation of directors of the two companies. The new company holds interests in 26,477 acres of oil and gas lands in the New York-Pennsylvania field.

The merger was effected on a stock exchange basis, and the capitalization of the new corporation, to be known as the Messer Oil Corporation, will be not less than $3,875,000.

The board of directors, which will serve until the first regular stockholder's meeting of the new corporation, is comprised of Charles L. Davis, Edward H. Wright and Arthur E. Yahn, all of Olean; Forest D. Dorn, Bradford; Duncan C. Dusenbury and William A. Dusenbury, both of Portville, New York; Joseph G. Fischer, New York; Seymour H. Knox, George F. Rand and Edwin H. Letchworth, all of Buffalo; and John A. Messer and A. L. Shaner, both of Bolivar, New York.

# TEAMWORK



● A sharp liner close to second base . . . The shortstop streaks to snare the ball—but invariably, in a good team, one of his mates is behind him, ready to "back up" the play. It's *teamwork* that wins first place in the standings.

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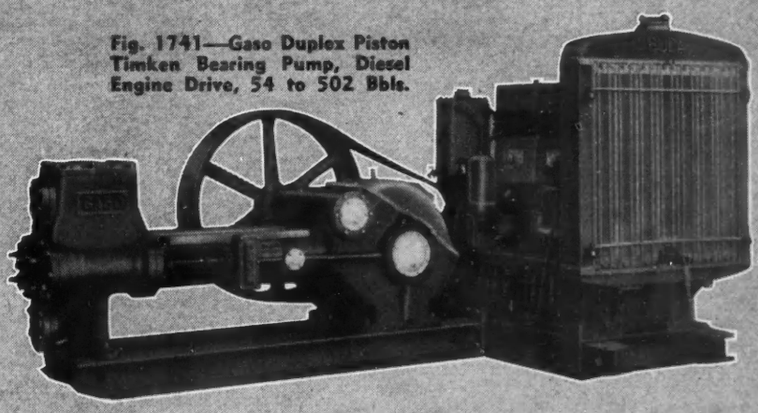
Fig. 1741—Gaso Duplex Piston Timken Bearing Pump, Diesel Engine Drive, 54 to 502 Bbls.



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# *March Figures*

## BUREAU SAYS RECORD OUTPUT CAUSES STORAGE INCREASE

**Washington, D. C.** — Exceeding the 100,000,000-barrel mark for the first month in the history of the oil industry, crude production in March reached a total of 106,724,000 barrels, an increase of nearly 13,600,000 barrels over February and more than 16,000,000 barrels above the March, 1936, output, it was reported May 14 by the United States Bureau of Mines.

Daily average production for the month set a new high record at 3,442,700 barrels, compared with 3,328,000 barrels in February and 2,922,000 barrels in March of last year, the bureau stated.

### Gain Widespread

The large gain in output in March was well distributed, with several states establishing new records, the report disclosed. Production in all the major districts of Texas was higher, and the daily average for the state rose to 1,404,900 barrels, or about 55,000 barrels above the average in February. California continued to register small gains in production, while Oklahoma's average of 650,800 barrels was the highest since 1930. Production in Pennsylvania and Wyoming exceeded 50,000 barrels daily for the first time in years. Michigan, on the downgrade from the latter part of 1935 to February, 1937, revived considerably, principally as the result of developments in the New Buckeye field. Kansas and New Mexico set new production records, the latter's average crossing 100,000 barrels daily for the first time.

### Additions To Storage Raised

The demand for crude petroleum showed comparatively little change from February, the report stated, and consequently the increases in production and imports simply raised the net additions to storage, which for March was 7,524,000 barrels, compared with 3,213,000 barrels in February.

The yield of gasoline was 44.5 percent for the month, compared with 45 percent in February and 42.6 percent in March, 1936. The indicated domestic demand for motor fuel was 40,561,000 barrels, 13 percent higher than a year ago, and stocks of motor fuel on March 31 totaled 81,651,000 barrels compared with 78,413,000 barrels at the beginning of the month and 74,485,000 barrels at the close of March a year

### Some Stocks Decline

"Although the consumption of gas oil and distillate fuel oils decreased as expected," the bureau commented, "stocks continued to decline, reaching what will probably be the low point of the year of 16,724,000 barrels. Stocks of residual fuel oil also were drawn on, the total of 78,435,000 barrels for March 31 being more than 2,000,000 barrels lower than stocks of a year ago."

Details of supply and demand in March, as reported by the bureau, were as follows, in barrels:

New supply: Domestic production, crude, 106,724,000; daily average, 3,443,000; Natural gasoline, 3,908,000; benzol, 255,000; total production, 110,887,000; Daily average, 3,577,000; imports, crude in bond, 136,000; for domestic use, 1,922,000; refined in bond, 2,420,000; for domestic use, 885,000; total new supply, all oils, 116,250,000; daily average, 3,750,000 increase in stocks, all oils, 7,566,000.

Demand: Total 108,684,000; daily average 3,506,000. Exports, crude, 3,196,000; refined, 7,014,000.

Domestic demand: Motor fuel, 40,561,000; kerosene, 4,786,000; gas oil and distillate fuels, 10,800,000; residual fuel oils 29,682,000; lubricants 2,490,000; wax, 88,000; coke, 401,000; asphalt, 1,273,000; road oil, 159,000; still gas, 4,981,000; miscellaneous, 245,000; losses 3,008,000; total domestic demand 98,474,000; daily average 3,177,000.

Stocks: Crude, 297,496,000; natural gasoline, 4,799,000; refined products, 231,847,000; total, all oils, 534,142,000; days' supply 152,000.

A slight decline in daily average from 5,347,000 gallons in February to 5,295,000 gallons in March was reported by the Bureau of Mines May 14.

Total output for the month, however, 164,136,000 gallons, was well in excess of the February production of 149,730,000 gallons, it was stated.

In general, the bureau explained, daily average production declined in all the leading fields, with Seminole, Oklahoma, as a notable exception.

Stocks of natural gasoline continued to show the usual seasonal increase, it was said. Stocks at plants and terminals increased about 15,600,000 gallons to a total of 84,504,000 gallons at the close of the month, while stocks at refineries increased about 6,000,000 gallons to 117,054,000 gallons.

## TAX COLLECTIONS

### April gasoline shows substantial gain

**Washington.**—A sharp upturn in gasoline consumption brought the federal revenue from the gasoline tax to $13,591,592 in April, an increase of $420,000 over the March total of $12,970,980 and $1,242,000 above the April, 1936, receipts of $12,349,446, according to the monthly collection report issued May 21 by the Bureau of Internal Revenue.

Collections from the lubricating oil tax also increased, amounting to $2,317,640 compared with $2,057,293 in March and $2,153,170 in April last year.

Receipts from pipe line transportation and processing, however, decreased, the formers total of $881,206 being $314,000 under the March figure of $1,195,186 although $54,000 above the April, 1936, collections of $826,939, while processing tax collections of $81,087 were some $4,000 under the March figure of $85,375 although $10,000 above the $70,767 collected in April of last year.

All of the oil taxes were well above last year's totals for the first four months of the current year, the bureau reported, gasoline tax collections being $56,181,046 against $50,075,870; lubrcating oil, $9,926,920 against $7,734,450; pipe line transportation, $3,923,708 against $3,297,538; and processing, $298,337 against $278,411.

## "HOT OIL" TRIAL

### Three are fined; 12 others to appear in court

**Houston.**—Three oil companies and Shuford Farmer having plead guilty to charges of conspiracy to violate the Connally act this week, trial of the 12 remaining defendants named in the indictment will be held before District Federal Judge T. M. Kennerly in Houston May 24.

Those scheduled to stand trial are Frank Bennett, George Arnold, Jr., Otis H. Gibson, Oren C. Roberts, A. Adelson, D. D. Feldman, M. D. Carter, H. E. Hines, L. R. Hepworth, Gulf Oil Marketing Company (associated in no way with Gulf Oil Corporation), Crescent Oil & Transport Company, and Higrade Oil Company.

Judge Kennerly fined Channel Transport & Marketing Company $17,500; he fined Adeltex Company $2500; and Adeloil Company, $15,000. The latter fine, it is said, will be paid on execution, which may mean the government may have to levy against the property of the company for the fine. Pronouncement of sentence on Shuford Farmer, former district attorney of Waco, was postponed until June 5.

The indictment charges that the men and companies conspired to violate the Connally act by moving hot oil from the Conroe field into interstate commerce. Defense arguments May 20 were based mainly on contentions of unconstitutionality of the Connally act.

## WOULD KEEP TAXES

**Washington, D. C.**—Extension for two years of the present federal oil taxes is contemplated in a resolution introduced in congress May 20 by Representative Doughton of North Carolina, chairman of the house ways and means committee.

Under the resolution, the expiration date for these and other miscellaneous taxes due to expire this year would be moved forward to 1939. Among the levies which the measure provides shall be retained are the taxes on gasoline and lubricating oils, imports, pipe line transportation and processing.

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# OKLAHOMA FIELDS

***Moore, Lucien, Langston and Billings extended.***

* * *

***Good show found in Tillman County wildcat.***

* * *

***To retest old Centrahoma well.***

**Oklahoma City.**—Drilling operations in this sector of Oklahoma continued to pick up, with extensions being made in the Moore, Billings, Lucien and Langston pools.

Phillips Petroleum Company's State 1, SW SE SE 16-10n-2w, in the Moore pool of Cleveland County, found Simpson sand at 6960 feet; Dolomite at 7000 feet and drilled to 7220 feet, where it was acidized with 5000 gallons. It was given a 241-barrel oil load and circulated, after which it made 243 barrels of oil gross in one head flow. During a test which followed, the well made 800 barrels of oil in 18 hours through drill pipe. It will be drilled to the Wilcox sand.

Tide Water Associated Oil Company's Hackett 4, NE SW SE 21-23n-2w, extended the Wilcox sand area of the Billings pool of Noble County to the south, being completed for 3815 barrels of oil and 6,300,000 cubic feet of gas. Production was through tubing from a total depth of 4330 feet.

The company's Hackett 5, SW NW SE 21-23n-2w, was preparing to take potential. It had drilled to 4326 feet, and made one flow of 173 barrels of oil in one hour through tubing.

### Langston Gets Extension

Ohio Oil Company's Knight 1, SE NE SW 12-17n-1w, Logan County, which had 42,500,000 cubic feet of gas from between 5032 and 5056 feet, was shut in for orders. The well came in last week for an estimated 40,000,000 cubic feet of gas. It is at 5055½ feet in the Wilcox sand and extends the Langston pool ½-mile northeast.

South of Langston, Eason Oil Company's Sisters 1, SWc 24-17n-1w, was plugging back to abandon at 5563 feet, following a survey which showed salt water in the top of the second Wilcox sand.

The Texas Company's Denny 5, NE NW SE 33-17n-4w, in the Crescent pool, Logan County, drilled to 6723 feet, and because of a poor showing was plugged back to 6250 feet. Casing was perforated between 6060 and 6230 feet, but no oil or gas was showing. It was then acidized with 2000 gallons, and a 207-barrel oil load run into the hole. It flowed 40 barrels of oil net in two hours and went dead. Production was from the Hunton lime accompanied by about 200,000 cubic feet of gas. It will be reacidized with 10,000 gallons.

Champlin Refining Company's Pfeiffer 3, SE NE NW 4-19n-2w, in the Logan County extension of the Lucien pool, had the second Wilcox sand from 4965 to 5030 feet and was showing for from 80 to 90 barrels of oil an hour with 45,000,000 cubic feet of gas.

### Lucien Extension

Phillips Petroleum Company's Pfeiffer 3, SW NW NE 4-19n-2w, was drilling in the second Wilcox sand at 4990 feet, making more than 75 barrels of oil an hour accompanied by 2,000,000 cubic feet of gas. It extends the area one-quarter mile south.

Mid-Continent Petroleum Corporation's Dobson 1, SEc 11-17n-1w, in the Langston pool, had a good show of oil from the Wilcox sand between 5073 and 5082 feet. Unusually good saturation was found in the last three feet of the formation.

Another test for north central Oklahoma is Carter Oil Company's Crisman 1, CW½ SW NW 16-26n-3w, east of Salt Fork in Grant County. The test, to be carried to the Wilcox sand, is being supported by Mid-Continent Petroleum Corporation, The Texas Company and Sinclair Prairie Oil Company.

Ohio Oil Company's State 1, SWc 13-23n-3w, southwest of the Billings pool, Garfield County, cored from 4680 to 4696 feet and recovered four and one-half feet of brown sand stained with oil; four and one-half feet of Dolomite and seven feet of bluish-gray sand with an odor of oil. Operators found a hard white sand in the second Wilcox between 4720 and 4729 feet, and coring from 4737 to 4745 feet, recovered five feet of hard white sand. Drilling was resumed.

### Britton Completion

Indian Drilling Company's McGrew 1, NW NE SW 20-13n-3w, in the Britton pool of Oklahoma County, established a potential of 6174 barrels of oil during a 24-hour test and averaged 12,000,000 cubic feet of gas. Following an 80-quart shot, the well was acidized with 10,000 gallons and flowed 457 barrels of oil the first hour; 231 barrels the second hour and 142 barrels the third hour. It was at a total depth of 6670 feet in Dolomite.

Ohio Oil Company's Dahl 14, SW NE SE 31-14n-3w, in the Edmond pool of Oklahoma County, had an increase in production while drilling below 6560 feet last week. Hourly gauges at the well showed it made 132.40 barrels of oil the first hour; 127.52 barrels the second hour and 112.24 barrels the third hour, accompanied by 18,500,000 cubic feet of gas. It made 1995 barrels of oil in 11 hours and had 18,000,000 cubic feet of gas.

Sinclair Prairie Oil Company's Marvel 3, NW NE NE 21-10n-2w, in the Moore pool, topped the Simpson Dolomite at 7020 feet and drilled to 7230 feet. Wilcox sand was found at 7225 feet and a showing of oil was had in the Dolomite. It was bailing and testing with acid before drilling into the Wilcox sand.

Gulf Oil Corporation's James 3, NE NW SW 27-10n-2w, drilled to 7264 feet in the Simpson sand and had a hole full of oil. It made 217 barrels of oil in 24 hours with 4,000,000 cubic feet of gas. It was to core ahead.

## *To retest Centrahoma well*

**Tulsa.**—A revival of interest in the Centrahoma area of Coal County; the testing of another well in the Muse area south of Fitts; a new and interestng test for Lincoln County and numerous good completions were on reports from southeast central Oklahoma last week.

Further testing is being planned for an old well in the Centrahoma area of Coal County, Carter Oil Company et al's Thompson 1, CS½ NE NW 34-2n-9e. Originally drilled to 7126 feet; the well had an odor of oil and gas from 6508 to 6510 feet in the McLish sand topped at 6440 feet. It was plugged back to 6510 feet and showed salt and sulphur water. A rig has moved in to perforate casing for a test of the Viola lime. The hole was never plugged, only the top casing being pulled.

Across the fault and south of production in the Fitts field, in the Muse area recently opened by E. H. Moore, his Thompson 1, NW SE SE 33-2n-7e, stopped drilling at 4127 feet in the Sylvan shale and flowed three barrels of oil in one hour from the Hunton lime. The well was acidized and put on gas lift and made 86 barrels of oil in one hour and 246 barrels of oil during the following 45 minutes. Another test was scheduled.

The new test for Lincoln County is MulBerry Oil Company's Keeler 1, NW NE NW 28-17n-3e, ¼-mile due south of the Sporn pool and ¼-mile southeast of production. It is also ½-mile from the discovery well of the area, Skelly Oil Company's Sporn 1, completed as a gasser.

E. H. Moore's Akers 14, NE SE NE 36-2n-6e, Fitts pool, drilled to 3710 feet in the Hunton lime and after being acidized, flowed 263 barrels of oil in 1½ hours through casing. It made a potential of 2195 barrels.

Amerada Petroleum Corporation's Wooley 12, SEc NW 22-2n-7e, was brought in to flow 82 barrels of oil in 1½ hours through tubing from 3838 feet.

Magnolia Petroleum Company's Mor-

in 3, NWc SE 20-2n-7e, made a 24-hour potential of 2055 barrels of oil and 2,145,000 cubic feet of gas. Bottom-hole pressure was 1510 pounds.

**Many Seminole Wells**

Numerous completions were reported from Seminole County. Amerada Petroleum Corporation and Stanolind Oil & Gas Company's Noble 3, SEc SW 25-10n-7e, in the Bethel pool of Seminole County, was completed for a potential of 1640 barrels of oil and 1,550,000 cubic feet of gas.

J. E. Crosbie completed McGert 1, SW SE SE 25-10n-7e, for 270 barrels of oil, 36 percent of which was water. It was on pump at 3665 feet. The Texas Company's Williams 1, SE NW SW 25-10n-7e, pumped 85 barrels of oil and 25 barrels of water per day from 3627 feet, and Amerada Petroleum Corporation et al's Billington 1, NEc SE 35-10n-7e, made a potential of 1318 barrels of oil and 1,000,000 cubic feet of gas from a total depth of 3660 feet.

Stanolind Oil & Gas Company and Amerada Petroleum Corporation's Riddle 2, SE NW NE 2-10n-5e, in the North Earlsboro pool of Seminole County, was drilled to 4624 feet and filled 3700 feet with oil in 45 minutes. It was put on swab and made 872 barrels of oil in 13 hours and 45 minutes and was shut in for tankage. Top of the Viola lime was found at 4552 feet and 7-inch casing was set at 4576 feet.

Amerada Petroleum Corporation's Pryor 4, NEc NW 36-10n-7e, in the West Cromwell field, flowed for 2½ hours, then swabbed 1½ hours, putting 172 barrels of oil in the tanks. The well was at a total depth of 3619 feet and later made a potential of 2187 barrels of oil in 24 hours.

In Tulsa County, Wheatley Brothers Pump & Valve Manufacturing Company's Wheatley 2, SEc 4-19n-12e, west of Tulsa, was completed for approximately 4,000,000 cubic feet of gas, production coming from the upper section of the Bartlesville sand between 1273 and 1276 feet. Wheatley 1 was completed for 1,500,000 cubic feet of gas several weeks ago.

Continental Oil Company's Thompson 1, NWc SE 2-1n-7e, in the Jesse pool of Pontotoc County, topped the Viola lime at 4164 feet; topped the Bromide at 4432 feet and drilled to 4621 feet where a survey showed water in the hole. It may be plugged back and either the Viola or Hunton limes tested.

**Two Holdenville Wells**

Two small producers were brought in in the Holdenville area of Hughes County last week. First was C. A. Palmer's Scroggins 1, NWc SE 20-7n-8e, in the West Holdenville area. Top of the Booch sand was found from 2909 to 2940 feet and when showing some free oil, was given a shot. Following the shot the well was put on pump and made 187 barrels of oil daily.

Winona Oil Company and Jarvis & Holme, Inc. Harjon 2, SEc NW 20-7n-8e, had the Booch sand from 2879 to 2934 feet and was shot with 40 quarts, following which it made 125 barrels of oil on the pump.

Carter Oil Company's Hamilton 1, CWL NE SW 33-4n-9e, near Citra in Hughes County, topped the Hunton lime at 5380 feet; topped the Sylvan shale at 5474 feet and made a test which had no show. It was drilling ahead below 5686 feet in the Viola lime.

Stanolind Oil & Gas Company and Amerada Petroleum Corporation's Arinwine 1, SE NW SE 35-15n-2e, in the North Wellston pool of Lincoln County, flowed 578 barrels of oil in 24 hours from a total depth of 5100 feet. It was acidized and flowed 85 barrels of oil in three hours. Testing was being continued.

Papoose Oil Company's Jones 1, NW SW NW 2-4n-5e, east of the Bebee pool of Pontotoc County, was to plug and abandon. Top of the Sylvan shale was found at 2480 feet; top of the Viola lime at 2595 feet and the well drilled to 2840 feet in the Simpson sand where it was tested. The showings there decided operators to abandon the test.

Lewis Production Company and The Texas Company's Claremore 9, SE NW SE 17-24n-7e, in the Naval Reserve pool of Osage County, had the Bartlesville sand from 2617 to 2651 feet and was shot with 20 quarts. The well then made 118 barrels of oil on the initial flow.

A disappointment was reported from the Midwest area of Okfuskee County early last week. It was Kingwood Oil Company's Wright 1, NEc SE 25-11n-9e, which topped the Senora sand at 1505 feet and had a show of oil at 1530 feet. After drilling to 1592 feet it was plugged back to 1582 feet and shot with 90 quarts. Following the shot only 10 feet of oil and some water was found in the hole. It showed salt water after drilling ahead and was to be plugged.

## *Tillman wildcat shows*

**Ardmore.**—Southern Oklahoma was quiet last week, most interesting items concerning a good show of oil in a test in Tillman County; the plugging of the state's second deepest test and some increased interest in the area surrounding a test in Stephens County.

The well which made the show was Magnolia Petroleum Company's Brown 1, SW SE NE 21-3s-18w, north of Davidson in southwestern Tillman County. The well found hard lime in the Pennsylvanian at around 5238 feet and was reported as having a good show of oil at 5410 feet with no gas or water showing.

The other test in the area, Indian Territory Illuminating Oil Company and Foster Minerals Corporation's Hatler 1, SWc NE 32-2s-17w, south of Frederick, was reported pumping steadily, averaging about 15 barrels of oil and more than 90 barrels of salt water daily.

**Plug Deep Test**

Announcement has been made of the plugging of Denver Producing & Refining Company's Sah-Cam 1, CSE SE 35-10n-10w, in the old Binger area of Caddo, and the second deepest test ever to be drilled in Oklahoma. Late in 1935, the well went to 10,084 feet and finding some oil saturated sand, was swabbed and went dry. When water broke into the hole, it was plugged back to 8300 feet, but whipstocking and redrilling still failed to develop any production. Water filled 3400 feet of the hole and could not be lowered.

The same company drilled A-Dah-Noe 1, NW SW SW 34-10n-10w, the deepest well in Oklahoma, continues to produce 50 barrels daily from a little below 10,000 feet.

It is rumored another major company is considering buying acreage near Angle et al's Lang 1, SWc NE 24-1n-7w, near Duncan in Stephens County, which was shut down at 3525 feet, the present contract depth. Negotiations are under way to carry the hole ahead to 5000 feet. Carter Oil Company and Sinclair Prairie Oil Company shot the area near the well with Carter holding 700 acres there and Sinclair Prairie holding 1010 acres.

Patsy Oil Company's Derdyn 2, SW SE SE 17-1n-3w, in the Robberson area of Garvin County, had a good show of oil in the lime at 3109 feet and was preparing to run five-inch casing. The well was believed to be bottomed in the Simpson sand.

Cox & Hamon's Harris 2, SW SE NW 32-1n-3w, in the North Tussy pool of Garvin County, flowed an estimated 75 barrels of oil and went dead. It had been drilled to 2466 feet and was running tubing at last reports.

## *75 Oklahoma starts*

**Tulsa.**—In Oklahoma last week the staking of locations kept ahead of well completions, 75 to 64. There were only 43 oil wells among the completions, total initial output being 27,900 barrels. The completions list was burdened with 16 dry holes, four gas wells and an abandoned location. By counties the locations were as follows: Pontotoc, 12; Seminole, 11; Creek, 7; Carter, 5; Tulsa, 4; Lincoln, Muskogee, Okfuskee and Osage, 3 each; Hughes and Noble, 2 each; Caddo, Comanche, Garvin, Jackson, Okmulgee, Pawnee, Payne, Pottawatomie and Washita, 1 each.

# OKLAHOMA Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| ATOKA COUNTY— | | |
| Prairie Investment, Cobb 2, sw ne nw 19-3s-11e. | * | 350 |
| CARTER COUNTY— | | |
| Heffner et al, Perkins 2, sw se se 4-1s-3w | 300 | 2780 |
| Skelly, Miller 2, nw nw ne 5-1s-3w (pb 2500) | 119 | 2832 |
| Barnett Pet., Hooks 1, sw ne sw 14-1s-3w | 45 | 2565 |
| Cox & Hammon, Jackson 7, se ne sw 15-4s-2w | 15 | 2567 |
| Schermerhorn Oil, Fee 37, se sw nw 5-4s-3w | 121 | 1109 |
| Roy Johnson, Davis 19, sw ne sw 6-4s-3w | 9 | 1145 |
| COTTON COUNTY— | | |
| Shasta Oil, Patterson 20, se ne nw 1-2s-10w | 20 | 2217 |
| Patterson 21, ne ne nw 1-2s-10w | 13 | 2203 |
| CREEK COUNTY— | | |
| Sinclair Prairie, Jones 4, se sw nw 4-17n-7e (pb 2745) | 23 | 2887 |
| Curtis Oil, Coonrod 1, nw ne sw 10-19n-9e | * | 2343 |
| Johnson Oil & Ref., Flinchum 6, se ne sw 11-19n-9e | 80 | 1176 |
| Elliott Bros., Ross 1-A, nw nw nw 20-19n-9e (otd 2350) | * | 2505 |
| GARVIN COUNTY— | | |
| Wrightsmith, Yates 3, se nw sw 33-1n-3w | * | 2375 |

[*Continued on next page*]

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| JACKSON COUNTY— | | |
| Gulf Oil, Eley 4, nw ne se 10-1n-20w | ¶200 | 1767 |
| Scheig, McCarty-Cole 2, ne se sw 34-4n-20w | * | 1786 |
| JEFFERSON COUNTY— | | |
| Circle Oil, Seay 40, ne sw se 3-7s-5w. | 10 | 1273 |
| Seay 42, nw sw se 3-7s-5w | 12 | 1095 |
| KAY COUNTY— | | |
| Clark Nye et al, McCullough 2, sw nw se 5-28n-1w | 600 | 2806 |
| LeFLORE COUNTY— | | |
| Lynch et al, Kidwell 1, cnw se 17-3n-22e | * | 3505 |
| MUSKOGEE COUNTY— | | |
| Joe Paul, Monday 1, se se se 4-13n-16e (otd 1754) | ¶1½ | 2065 |
| Mussellem, Shultz 1, se ne se 33-14n-19e | ¶¼ | 1501 |
| Wright et al, Colbert 1-A, cw½ se 4-16n-15e | * | 1235 |
| NOBLE COUNTY— | | |
| Tide Water, Schaffer 1, ne ne sw 21-23n-2w | ¶2¼ & 3912 | 4324 |
| OKFUSKEE COUNTY— | | |
| Manahan Oil, Bolin 2, ne ne ne 24-10n-8e | lcn. | abd. |
| Manahan Oil, Dolton 19, sw nw se 36-10n-8e | 108 | 1728 |
| Okla. Oil Corp., Campbell 1, se se ne 8-10n-9e | * | 1860 |
| Arkansas Royalty, Lehmer 1, nw nw sw 17-10n-9e | 26 | 1930 |
| Brooks 4, ne se sw 18-10n-9e | 100 | 1902 |
| Burk Greis, Dunson 1, se se ne 19-10n-10e (otd 2980) | ¶6 | 3259 |
| Stekol, Ditzler 4, sw ne ne 2-10n-11e | * | 1720 |
| OKLAHOMA COUNTY— | | |
| Big Chief Drlg., Stephens 1, sw nw se 15-12n-3w (pb 6450) | 85 | 6484 |
| Bryan Pet., Howes Capital 1, ne nw se, 27-12n-3w | 705 | 6527 |
| Stahl Pet., Harkins 1, sw sw se 20-13n-3w | ¶12 & 3024 | 6704 |
| OKMULGEE COUNTY— | | |
| Eagle Picher, Bullett 2, nw nw se 27-12n-12e (otd 3312) | 10 | 3418 |
| Henry 2, nw nw se 27-12n-12e (otd 2200) (pb 3340) | * | 3354 |
| OSAGE COUNTY— | | |
| Lewis Prod. 3, nw sw sw 27-24n-7e. | 286 | 2644 |
| Tulsa Osage Oil, 1, nw nw se 14-24n-8e | * | 2707 |
| Gulf Oil, Revard 3, nw nw se 26-26n-6e (pb 2866) | 95 | 2868 |
| PAWNEE COUNTY— | | |
| I. T. I. O., Little 10, se sw nw 6-20n-8e (otd 2704) | 1 | 2731 |
| E. O. Platter 2, nw nw sw 4-20n-9e | 3 | 780 |
| Adamson, Reynolds 3, nw nw se 25-21n-8e | * | 1140 |
| PONTOTOC COUNTY— | | |
| Moore, Akess 13, ne nw ne 36-2n-6e | ¶2¼ & 3336 | 3715 |
| Magnolia, Norris 11, se nw se 21-2n-7e | ¶2½ & 3454 | 3929 |
| Gitty, Masters 3, nw nw se 23-2n-7e | ¶2 & 2596 | 3894 |
| Masters 4, sw se nw 23-2n-7e. | ¶½ & 5355 | 3920 |
| Bishop Oil, Simpson 2-A, se nw nw 28-2n-7e | 240 | 2600 |
| Carter, Smith 13, se ne sw 28-2n-7e | ¶3¼ & 137 | 3516 |
| Fleetborn, Wooley 7-A, se ne se 28-2n-7e | ¶2 ½ 1189 | 3494 |
| Moore, Schauers 7-A, se se nw 29-2n-7e | 51 | 2660 |
| Woodroff 3-B, ne nw se 29-2n-7e. | 144 | 2560 |
| Delaney, Starrett 1, sw se ne 21-5n-5e (otd 2597) | 105 | 2610 |
| Mary "F" Oil, Miller 1, nw nw sw 15-5n-8e | 50 | 950 |
| POTTAWATOMIE COUNTY— | | |
| Gulf, O'Connor 1, nw nw se 25-6n-4e (otd 3499) (3560) | * | 3650 |
| *Hilton Phillips, Bettis 4, se sw sw 21-7n-4e (pb 4154) | 225 | 4301 |
| SEMINOLE COUNTY— | | |
| Francis, McKinney 4, sw se ne 24-5n-5e | 154 | 2540 |
| Magnolia, Fee No. 64, 1, nw nw se 24-5n-5e | 168 | 2603 |
| Hall et al, White 1, se nw se 30-6n-8e (pb 1366) | 45 | 2612 |
| Maradum, Herrod 1, sw sw ne 3-8n-8e (pb 3400) | * | 3453 |
| Continental, Johnson 3, ne se nw 18-9n-7e | * | 4035 |
| Amerada et al, Parks 3, ne se sw 35-11n-5e | 852 | 4632 |
| Texas Co., W. Grisso 2, nw nw nw 16-9n-7e | * | 4421 |
| STEPHENS COUNTY— | | |
| Carl Carter, A. N. Harley 7, ne se ne 24-2s-4w | 6 | 438 |
| TULSA COUNTY— | | |
| Johnson O&R, Lowden 3, ne ne se 31-19n-10e | 80 | 2282 |

*Failures; †Junked; ¶Million cu. ft. gas.

# KANSAS FIELDS

***Well may link Ochs and Trapp fields.***

* * *

***Ellinwood, Silica and Peter pools conected.***

* * *

***Walters field of Ellis County is extended.***

**Wichita.**—Linkage of several pools in Kansas, and the taking over of operations at the state's most interesting wildcat test were chief items of interest in the Sunflower state last week. Other developments included several extensions.

First of the links looked to be established between the Ochs and Trapp pools of Russell County as Empire Oil & Refining Company's Bender 2-A, SE NE NW 25-14s-15w, had the Siliceous lime at 3331 feet and pumped 649 barrels of oil in eight hours. It may prove to be the linking well, but when last reported, was shut down for repairs.

Stanolind Oil & Gas Company's Kowalsky 1, NWc NE 11-20s-11w, which has established the connecting link between the Ellinwood, Peter and Silica pools of Barton County, filled 1600 feet with oil in one hour after the cement plug was drilled and the well carried ahead to 3282 feet. It was to be drilled two feet deeper.

Interest in Denver Producing & Refining Company and W. J. Sherry's Porter 1, SWc NE 30-25s-41w, cited as the most interesting wildcat in the state today, was heightened last week when Barnsdall Oil Company acquired 50 percent interest in the well and the 160-acre tract on which it is located. Sherry sold his interest to Barnsdall Oil Company, which will take charge of the well, which will be carried to the Siliceous lime. The additional 10,000 acres acquired by the company from Sherry gives it a total holding of 15,000 acres in the immediate vicinity. When last reported, Porter 1 was drilling ahead below 2200 feet in the Permian, below the main fault.

### Walters Is Extended

Phillips Petroleum Company's Staab 1, NWc NE 11-12s-18w, was an extension well in the Walters pool of Ellis County when it filled 2225 feet with oil. The extension is one location to the east. Carter Oil Company recently made a big acreage deal in the area.

Carter Oil Company's Detrich 4, NWc SW 8-15s-13w, midway between the Trapp and Berrick pools of Russell County was pumping 65 barrels of oil an hour natural from the Siliceous lime between 3183 and 3188 feet. It made a potential of 1570 barrels of oil. The company has made location for Detrich 5, CNLS½ SW 8-15s-13w.

The Texas Company's Kleile 1, NE SW SW 34-19s-10w, west of Chase in Rice County, which had the Siliceous lime from 3314 to 3326 feet, acidized with 1000 gallons, and made 1582 barrels of oil during the first 18 hours of potential test.

Continental Oil Company's Wood 1, NWc SE 12-18s-8w, an east offset to the discvovery producer in the Geneseo pool of Rice County, filled 2500 feet with oil after the plug had been drilled at 3225 feet in the Siliceous lime. Top of the formation was encountered at 3217 feet. North offset to the discovery well had a hole full of water in the lime. Wood 1 pumped 1536 barrels of oil natural in 21 hours.

Empire Oil & Refining Company's Bredfeldt 1, CN½ N½ SW 17-18s-9w, in the Richard area of Rice County, had Siliceous lime at 3225 feet, and drilled to 3240 feet, where it was acidized with 1500 gallons. The well then pumped 267 barrels of oil and no water in 24 hours.

Mid-Continent Petroleum Corporation's Wood 6, NWc NE 4-20s-10w, in the Rice County sector of the Silica pool, pumped 121 barrels of oil in 24 hours following acidization with 1000 gallons. The well was bottomed at 3315 feet in the Siliceous lime, and when deepened to 3334 feet, was treated with another 1000 gallons of acid.

In the same section, Sinclair Prairie Oil Company's Knop 1, Section 4-20s-10w, drilled to 3336 feet in the Siliceous lime and, following acidization with 1000 gallons made 248 barrels of oil.

Phillips Petroleum Company has made location for Bolton 1, W½ SWc NE 31-18s-7w, an east offset to M. D. Scruggs et al's Bolton 1, recently completed extension well in the Geneseo pool of Rice County.

The Texas Company's Schoonover 1, SEc NW 6-19s-9w, looked to be a failure. The well is offset by production on two sides and is at the north end of the Chase pool. Top of the Siliceous lime was found at 3254 feet and it was drilling ahead at 3263 feet with nothing showing.

Deep Rock Oil Corporation et al's

Baumer 3, SW NW NW 27-11s-17w, in the Bemis pool of Ellis County, had the Siliceous lime from 3412 to 3419 feet and filled 3000 feet with oil in two hours. Tubing was being run preparatory to taking a potential test.

Skelly Oil Company's Shutts 3, NEc SE 5-12s-17w, in the Shutts area, had the Siliceous lime from 3508 to 3520 feet and pumped 2423 barrels of oil the first 24 hours on its potential test.

Sinclair prairie Oil Company's Romine 1, SWc 7-11s-16w, northeast diagonal offset to the discovery producer in the Cress pool, was completed for 960 barrels of oil from the Simpson sand and Siliceous lime at around 3307 feet. It was shut down for 3½ hours during the 24-hour potential.

Amerada Petroleum Corporation's Nelson 1, NEc NW 5-32s-1w, farthest southwest test in the Wellington pool of Sumner County, was acidized with 1000 gallons after the hole had filled 1500 feet with oil from the chat at 3692 feet. The showing made by Nelson 1 indicates a very good producer. North and northeast offsets were completed as small wells.

Indian Territory Illuminating Oil Company's Peter 3, SEc NW 24-20s-11w, at the southeast edge of the Peter pool of Barton County, was completed for a potential of 1605 barrels of oil on pump in 24 hours.

The company's Bryant 1, SWc NW 25-20s-11w, in the Peter pool, topped the Siliceous lime at 3277 feet and cemented 7-inch casing at 3279 feet. It was showing some oil.

# KANSAS

## Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| BARTON COUNTY— | | |
| Magnolia, Mueller 2, ne nw ne 1-18s-11w | 1497 | 3259 |
| Lario & Atlantic, Peter 5, se ne nw 24-20s-11w | * | 3312 |
| Magnolia, Raetzel 5, se nw ne 24-20s-11w | 1526 | 3253 |
| BUTLER COUNTY— | | |
| Seibel et al, Bisagno 1, se se nw 24-25s-6e | * | 2863 |
| Aylward & Wixson, Clancey 1, sw nw sw 10-26s-3e | * | 2845 |
| CHASE COUNTY— | | |
| Polkamus, Leedy 5, ce½ sw 25-22s-9e | 137 | 2550 |
| CHAUTAUQUA COUNTY— | | |
| Schafer & Howell, Landon & Floyd 1, ne ne sw 23-32s-10e | 50 | 1955 |
| COWLEY COUNTY— | | |
| Roth & Faurot, David "B" 3, sw nw se 35-30s-4e | 65 | 2963 |
| Ryan, Consolidated, Couch 1, sw sw se 13-30s-5e | 43 | 2842 |
| Lewis Prod., David 2, sw nw ne 2-31s-4e (pb 2978) | * | 2990 |
| ELLIS COUNTY— | | |
| British American, Bemis 8, se sw sw 22-11s-17w | 2864 | 3432 |
| Ryan Consolidated, Bemis "B" 3, se sw nw 22-11s-17w | 2634 | 3432 |
| Deep Rock, Baumer 2, ne nw nw 27-11s-17w | 2938 | 3482 |
| Wolf Creek, Bemis "A" 1, sw sw ne 4-12s-17w | 2851 | 3568 |
| Phillips et al, Bertha 2, ne ne se 5-12s-17w | 2416 | 3520 |
| Lario, Walter "B" 1, ne se sw 2-12s-18w (pb 3240) | * | 3670 |
| Carter Oil, Staab 1, ne ne nw 11-12s-18w | 1427 | 3621 |
| Gulf, Swires 3, se se sw 8-15s-18w | lcn. | abd. |
| ELLSWORTH COUNTY— | | |
| Carter et al, Elizabeth 4, cs½ s½ ne 34-17s-9w | * | 3183 |
| Gulf, Grizzell 4, se sw nw 31-17s-10w | 1930 | 3250 |
| Spencer & Yarnell, Geminhardt 1, nw sw sw 31-17s-10w (pb 3049) | 3870 | 3071 |

***Permian production prospects have bad week.***

* * *

***Fisher County well flow starts leasing flurry.***

* * *

***Second Seminole well is being completed.***

**San Angelo.**—Delaware lime and sand series lost ground the past week as a contender for the Permian on production honors in West Texas. Failure of a prospective producer in Reeves County; an apparent dry hole, offsetting the discovery well of the Mason field, Loving County; and poor showing by a test near production in western Ward County reacted against the Delaware play that has been revived in recent months.

Stanolind Oil & Gas Company's Minnie Kyle 1, south offset to the discovery well of the Mason field, yielded 650 feet of salt water with a small amount of oil after 190-quart nitro shot at 3845-3917 feet. The hole was drilled to 3930 feet, with an elevation of 3069 feet, and is scheduled to be deepened. Kyle 1 is slightly higher on structure than the offset flowing well, and is about level with the northwest diagonal offset. Aggressive drilling program previously announced for the area may be curbed somewhat until more information is available as to the trend of production. Stanolind Oil & Gas Company had planned to drill a second test one location to the west to match the other producer completed by Michigan Oil & Gas Company, successor to the Mason Oil Company. Woodley Petroleum Company will proceed with its development contract on the Texas Pacific Land Trust acreage. Roy A. Westbrook, Fort Worth, et al recently contracted to takeover Phillips Drilling Company's four 40-acre tracts within the discovery block and drill each, with the latter retaining 1/16 over-riding royalty as part consideration.

Grisham - Hunter Corporation's C. Montgomery 1-A, Reeves County wildcat near Toyah, showed 1200 feet of salt water with a trace of oil after nitro shot at 3940-4053 feet, having been plugged back from 4065 feet to 4058 feet. Small amount of gas and free oil appeared in the hole before it was drilled into water at 4064 feet, or 1173 feet sub-sea. Barnett Petroleum Corporation, Dallas, et al's Ely-Conoco 1, located about 9 miles southwest of Toyah, has cemented surface pipe. General Crude Oil Company et al's previously announced test for northern Reeves County will start shortly on Texas Pacific Land Trust 1, C NE Section 15, Block 56, T & P Ry. Survey, Tsp. 2. It is contracted to drill to 4000 feet, and is on a block assembled by Bruce McKague and J. N. Gregory, having plugged back from 4700 feet.

New producing area opened in east-

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| HARVEY COUNTY— | | |
| Olson & Shell, Schrag 1, nw ne nw 30-23s-3w | 599 | 3366 |
| PAWNEE COUNTY— | | |
| Canshaw et al, Reiderer 1, cw½ nw se 29-21s-19w | * | 4530 |
| RENO COUNTY— | | |
| Ballard & Wallace, Lyman 1, nw nw se 16-24s-4w | 536 | 3369 |
| National Pet., Tucker 2, nw nw ne 19-24s-4w | 2286 | 3325 |
| RICE COUNTY— | | |
| Gulf, S. Wendell 6, sw sw se 32-19s-10w | 2323 | 3280 |
| Stanolind, Mitchell 7, sw ne sw 32-19s-10w | 1687 | 3337 |
| M. Panning 3, nw se nw 33-19s-10w | 1405 | 3330 |
| Ohio Oil, Proffitt 3, sw nw se 18-30s-9w | 1130 | 3336 |
| Atlantic, Patton "D" 1, ne ne nw 7-21s-7w | 602 | 3346 |
| Texas, C. Kleile 7, se se sw 34-19s-10w | 2362 | 3326 |
| C. Kleile 6, ne sw sw 34-19s-10w | 1119 | 3320 |
| Reserve Dev., Patton 2, nw nw nw 16-21s-7w | 1308 | 3383 |
| Patton 3, ne nw nw 16-21s-7w | 1883 | 3382 |
| RUSH COUNTY— | | |
| Davis, Brack 1, nw nw nw 23-16s-16w | * | 3612 |
| Sinclair Prairie, Schuerman 1, se se ne 5-18s-16w | ¶6 | 3550 |
| RUSSELL COUNTY— | | |
| Smoky Hill Oil, Miller 2, nw nw nw 31-14s-13w | 1085 | 2946 |
| Sinclair Prairie, K. Sellens 2, se sw sw 25-15s-13w | 996 | 3373 |
| Phillips, Hofman 8, se nw se 31-15s-13w | 2760 | 3338 |
| Hoffman 9, ne sw se 31-15s-13w | 3340 | 3309 |
| Shell, Michaelis 3-A, nw sw nw 31-15s-13w | 415 | 3035 |
| Skelly, Neidens 3, ne sw ne 32-15s-13w | 2008 | 3342 |
| W. I. Southern, Boomhower 8, sw se nw 32-15s-13w | 1100 | 3286 |
| Saco Oil et al, Pond 1, sw sw nw 21-15s-15w | * | 3350 |
| SEDGWICK COUNTY— | | |
| Murphy et al, Thone 1, sw sw nw 19-28s-1w | * | 2826 |
| STAFFORD COUNTY— | | |
| Lario & Atlanta, Morgan 3, cw½ w½ se 23-24s-13w (pb 4124) | 795 | 4131 |
| SUMNER COUNTY— | | |
| Stelbar, Erker 16, se se sw 33-31s-1w | 1275 | 3706 |
| WOODSON COUNTY— | | |
| Oko Oil, Wiede 6, cw½ sw sw 32-23s-15w | 25 | 1560 |
| Saco Oil, Klick 4, cs½ sw sw 20-25s-14e | 104 | 1411 |

*Failures; †Junked; ¶Million cu. ft. gas.

New producing area opened in east-

ern Howard County and between the Denman and Chalk fields by Moore Bros. Corporation's Texas Pacific Land Trust 1, NEc Section 33, Block 30, T-1-S, has been offset to the north by Iron Mountain Oil Company et al. The well pumped off after making 140 barrels oil on May 17, and later pumped 190 barrels initial at 2900 feet, or 599 feet below sea level. Previously drilled failures in the area tend to limit the producing area.

Preliminary production test the past week given Basin Oil Properties, Inc. (was R. H. Henderson et al's) A. J. Herrington-California 1, located 2½ miles north of nearest production in the McCamey field, Upton County, credit the well with swabbing 10 to 12 barrels of oil per hour from lime at 2815-2825 feet. It will be acidized. Location is on Section 4, Block 3½, involving a farm-out by Standard Oil Company of Texas.

An Ordovician test to be started prior to July 1 in northwestern Crane County has been announced by Wilcox Oil & Gas Company on a block of leases recently assembled by J. E. Fitz-Patrick and F. C. Dodson. Location will be on the M. B. McKnight ranch, C SE NW Section 9, Block 46, G. & M. M. B. & A. Survey. Humble Oil & Refining Company is credited with having taken lease on about 26,000 acres out of the Yarbrough-Allen ranch, situated to the north and west, as protection against deep production. The deal is reported to involve a cash bonus of $3 per acre, and 50-cent rental for a 10-year term. Gulf Oil Corporation's M. B. McKnight 2, C NE Section 9, Block B-21, PSL Survey, located short distance northeast of the company's wildcat pumper, failed to develop production from the Permian in drilling to 5038 feet, and will deepen to the Ordovician. The same concern's W. N. Waddell et al 3, northeast outpost for the Sand Hills field, is carrying 7-inch pipe while drilling at 4112 feet to be prepared to continue to the Ordovician if the Permian does not afford attractive production, and Waddell et al 5, south offset to the big producer in the lower pay, was fighting crevice at 868 feet.

### Crane Well Improves

Workover operations performed by Sinclair Prairie Oil Company's University 1-24, NE NE SW Section 13, Block 35, northern Crane County semi-wildcat, boosted the flow to 342 barrels daily, without water. It was orginally completed April 24 flowing 380 barrels oil after using 5000 gallons of acid in lime at 3512-3615 feet, with an elevation of 2797 feet, but water developed, possibly due to the acid penetrating to the water level. The hole was plugged back to 3591 feet to exclude the water. Snowden & McSweeney Company and The Texas Company have each announced offsets. Eventual linking of this outpost with the Judkins field, Ector County, has become more remote since Jack P. Cusack et al's University 1, NW NW NE Section 4, Block 30, offsetting production in the Ector County area, registered a sharp structural dip and small oil yield after 600-quart nitro shot at 3500-3740 feet.

Phillips Petroleum Company and Pure Oil Company's Jess Cowden 2, C SW Section 24, Block 44, T-1-S, one-half mile east of the southern most well in the Goldsmith field, Ector County, failed to make an oil producer from three thin oil stained zones at the 4200-4300-foot level, and is plugging back from bottom hole water at 4321 feet to shoot. Gulf Oil Corporation's completed well to the west indicated a sharp break in the structure, and this later prospect substantiated the development. Landreth Oil Corporation's Cummins 1-A, NW SE SW Section 10, Block A, situated about ¾-mile northeast of nearest production in the Goldsmith field, drilled into water at 4232-40 feet, with an elevation of 3192 feet, and flowed 155 barrels natural after plugging back to 4234 feet. Production trend to the northeast of the North Cowden field was also broadened the past week when Sun Oil Company's Holt 1-C flowed 631 barrels initial after 700-quart shot at 4110-4310 feet.

Unexpected head of gas developed by Magnolia Petroleum Company's J. B. Walton 82, an inside location for the Kermit field, Winkler County, hurled a 40-quart can of about 80 feet up into the steel derrick and exploded. The shot had been lowered about 500 feet to shoot sandy-lime at 2925 feet when the gas flow revived. Shooting crew and rig men heard the gas flow and all successfully escaped. The damaged derrick has been replaced. This company's Walton 77, located on the east edge of production, encountered a low structural position, and failed to make a commercial producer after shot in regular zone at 2720-2972 feet, but a second shot at 3151-3282 feet resulted in a rated flow of 612 barrels initial. The oil tests 34 gravity, and is slightly lower than nearby wells to the west.

Gulf Oil Corporation's Edwards 1-A, west offset to the first oil producer in the Texas portion of the Eaves field, N. M., was awaiting shot at 3148 feet, or 217 feet sub sea, after flowing 110 barrels pipe line oil in 7 hours with gas volume rated at 1,714,000 feet daily. A south offset to the above well is flowing about 3000 barrels of water to produce 40 barrels oil from the same horizon that Edwards 1-A produced gas and a spray of oil.

## TEXAS PANHANDLE

### Completions

| Company, Well and Location— | Init. Prod., Bbls. | Depth |
|---|---|---|
| CARSON COUNTY— | | |
| Empire O&R Co., Deahl 5 | ¶18 | 2590 |
| Northern Oil Co., E. Cooper 4 | 708 | 3156 |
| Texoma Nat'l Gas Co., Talley-Baird 1 | ¶20.3 | 2799 |
| GRAY COUNTY— | | |
| Cree & Hoover, W. E. Melton 1 | ¶13.6 | 3201 |
| Danciger O&R Inc., E. G. Barrett 12 | 529 | 3300 |
| Doniphan O&G Co., T. B. Cobb 4 | 335 | 3331 |
| Magnolia, Tom Catlin 1 | 664 | 3210 |
| Sinclair Prairie, P. A. Coomley 4 | 475 | 3200 |
| HUTCHINSON COUNTY— | | |
| Phillips Pet. Co., E. T. Timms-Moore 5 | 511 | 3163 |
| Stanolind, W. B. Haile 1-B | 230 | 3062 |
| E. E. Watkins 2-B | 292 | 2870 |
| MOORE COUNTY— | | |
| Texoma Nat'l Gas Co., J. T. Sneed 11-SN | ¶49.7 | 3045 |

*Failures; †Junked; ¶Million cu. ft. gas.

## *Wilbarger test shows and will be deepened*

**Wichita Falls.**—Preliminary production test given W. W. McDonald and R. B. Campbell's W. T.Waggoner Estate 3-A, NEc H & T C Section 26, Block 4, lower Canyon prospect for the Rock Crossing field, Wilbarger County, yielded about 50 barrels of oil before swabbing dry at 3577 feet. Owners plan to deepen since no water appeared from the sandy - lime zone topped at 3568 feet, with an elevation of 1132 feet. Oil saturated zones at 3040-57, 3120-25 and 3168-73 feet were passed up without testing in order to try for production in the lower Canyon, with 5-3/16-inch pipe cemented at 3553 feet. The latter 3 oil zones are new for the area, which has experienced a large scale deepening and new drilling program on the strength of four natural flowing completions from the upper Canyon at 3076 feet 2¾ miles to the northwest.

Davis Oil Corporation's W. T. Waggoner 1-A, Section 36, Block 2, 3 miles northwest of the quartet of Canyon wells, was abandoned early last month after testing water at 3182-97 feet, but has resumed drilling to try for production in the lower Canyon after cementing 5-inch pipe at 3214 feet.

### Bryson Extended

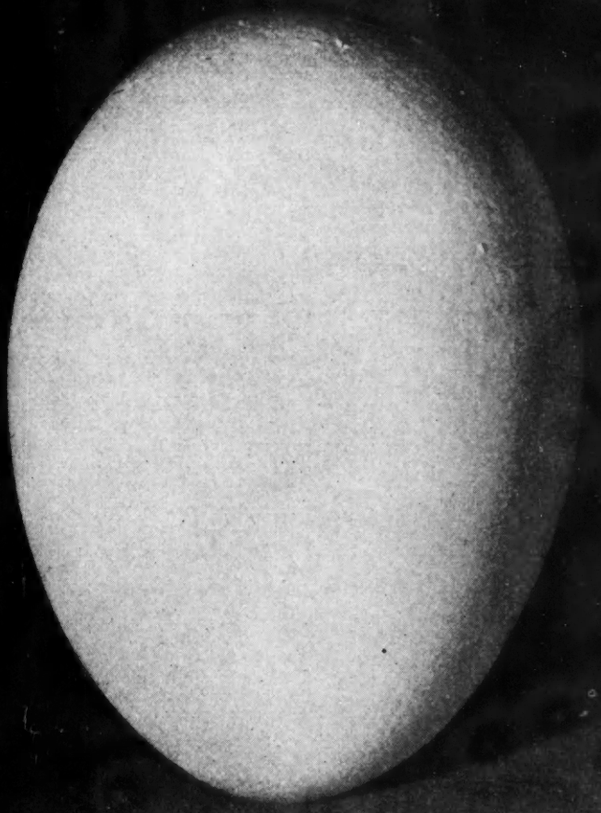
Production in the Bryson district, Jack County, was extended to the west border of Bryson townsite by Barney Cockburn et al's A. Roberts 1, which flowed 15 barrels oil and 1,500,000 feet of gas daily from Strawn at 2993-3005 feet. It will be deepened.

Deep test for central Young County is underway on The Texas Company's A. D. Moore 1, located in northeast part of 120-acre lease, T E & L Section 3412. Top of lime was logged at 4135 feet, with an elevation of 1295 feet, and drilling was underway at 4800 feet last week.

Southern Cooke County furnished a prospective wildcat oil producer when Whitfield, Pearson & Grimes (was Sparks & Russell's) C. F. Bundy 1, 15 miles south of Muenster, cored oil saturated sand at 2090-2102 feet. Casing will be set to test. Location is in the P. P. Cady Survey, A-1239, and 6 miles northwest of a small oil producer recently completed in northwestern Denton County from sand at 1652 feet.

## *Fisher County well flow causes leasing flurry*

t **Abilene, Texas.** — Natural flow of high gravity oil developed by a northwestern Fisher County wildcat drilled by National Petroleum Corporation, Dallas, on the Joe Robinson tract, C E½ NW H & T C Section 172, Block 2, created a big demand for lease and royalty protection in the general area. Close-in acreage is mostly in the hands of large interests. Potential oil flow is estimated at from 750 to 1000 barrels daily from 3 feet of lime, tentatively identified as the Noodle Creek zone, topped at 3502 feet, or 1554 feet subsea. The well began making heads of 38 gravity oil on May 15, and when shut in to await the running of a string of pipe and installation of tankage a leak in the control head permitted a



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**HOUSTON, TEXAS**

small but steady flow into pits. This new strike is 3 miles northeast of Rotan, and 3¼ miles west by south of Tide Water Associated Oil Company and Merry Bros. & Perini, Inc.'s three wells on the M. Howard tract. The latter are fair pumpers from lime at about 3670 feet, or about 1820 feet sub-sea. Sam C. Yingling is president of the discovery company, and formerly operated as Southern Oil Corporation of America.

National Petroleum Corporation's discovery is producing from a shallower horizon than the pumpers on the Howard farm, and is the equivalent of an upper zone generally passed up by wells drilled in the Royston field, original oil area for the county. The two older areas do not yield natural flowing wells as a general rule, and acid is necessary to make attractive pumpers. The Dallas concern disposed of the bulk of its original block, embracing about 8 sections, by selling a spread to Tide Water Associated Oil Company for $4500, and a spread to Magnolia Petroleum Company at $12.50 per acre. The latter is well fortified with acreage, having held lease for some years in 3 directions from the strike. General Crude Oil Company, largest producer in the Royston field, also bought a lease spread on the strength of the supporting sub-surface geology.

H. W. Martin and O. W. Brubaker et al's M. M. Brown 1, offsetting a small producer on the south end of the Royston field, registered good saturation from lime at 3190-3194 feet, but when treated with acid showed very little oil with water.

General Crude Oil Company is starting a wildcat in southeastern Stonewall County along a projected production trend from the Royston field. Location is on the W. H. Bryan 2566½-acre tract, Wm. Vardeman Survey.

Semi-wildcat test of A. P. Kouri et al on the J. D. Winkles 100-acre lease, J. M. Polk Survey, A-495, Jones County, filled 550 feet with oil shortly after drilling sand at 1808-1812 feet. Operations were halted to lower 6⅝-inch pipe to the oil zone. Location is in the southwest corner of the lease, and a mile south of a wildcat oil producer. Condor Petroleum Company's C. G. Logsdon 1, NEc Lot 30, H. Millard Survey, filled 600 feet with oil in 3 hours after drilling oil pay at 1911-1917 feet, and will run pipe to test.

# NORTH TEXAS
## Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth. |
|---|---|---|
| ARCHER COUNTY— | | |
| J. D. Carpenter et al, Fee 2-A, sec 39 | * | 1094 |
| Geo. Proctor et al, Geo. Kuhr 1, blk 122 | * | 2302 |
| Underwood Drl. Co. et al, R. O. Andrews 2-C, sec. 1805 | * | 957 |
| CLAY COUNTY— | | |
| F. M. Gates et al, I. H. Kempner, 1, blk 45 | * | 755 |
| Metzner & L. T. Burns, Thornberry 19, blk 11 | * | 345 |
| COOKE COUNTY— | | |
| F. W. Merrick, Inc., A. Knabe 37, blk 6 | 15 | 791 |
| A. D. Robinson et al, J. H. Otto 6-A, blk 5 | 20 | 872 |
| Seitz-Comegys & Seitz, Inc., J. W. Mount 2 | 40 | 1550 |
| Sinclair Prairie, J. W. Hess 2 | 15 | 838 |
| Vindicator Oil Co., Walterscheid 12. | 8 | 790 |
| GRAYSON COUNTY— | | |
| Olson Drl. Co., J. H. Gardner et al, D. R. Utiger 1 | * | 6004 |
| JACK COUNTY— | | |
| Big Six Oil Co., J. S. Callis 1, sec. 1 | * | 3505 |
| Hanlon-Buchanan, Inc., E. M. Sampley 1 | 306 | 3054 |
| Hill & Hill, Inc., C. R. I. & G. Ry. Co. 3 | 366 | 3040 |
| John Korp et al, F. C. Bloodworth 3, lot 6 | * | 300 |
| Mar-Tex Oil Co., W. J. Chambers 9. | 171 | 2978 |
| S. M. Jones 2 | 58 | 3118 |
| Moncrief & Showers, Inc., S. M. Jones 1 | 330 | 3200 |
| Panhandle Ref. Co., M. B. Cook 6.. | 66 | 2958 |
| Peery & Woody, J. A. Baker 1-B.. | 391 | 2977 |
| J. A. Raley 3-B | 582 | 2964 |
| J. A. Raley 4-B | 398 | 2948 |
| Vaughn Pet. Co., Wm. Simpson 1, sec 3 | ¶6.4 | 3047 |
| Yorktex Pet. Co., States Oil Corp., D. C. Clayton 3-A | 280 | 3000 |
| MONTAGUE COUNTY— | | |
| Gibson-Jennings, Inc., R. Howard-Conoco 1, blk 91 | * | 3003 |
| Lesh & McCall, Cunningham 16-A.. | 46 | 939 |
| Heaton 1 | * | 1842 |
| THROCKMORTON COUNTY— | | |
| Canyon O&G Co., G. C. Wright 1-A. | * | 597 |
| WICHITA COUNTY— | | |
| Bridwell Oil Co., Geo. F. Woodruff 1, blk 269 | * | 965 |
| G. W. Cooper et al, W. T. Waggoner Est. 20-C | 225 | 1624 |
| Culbertson Co., Waggoner Bros. 84, sec. 35 | * | 689 |
| Deep Oil Dev. Co., Munger 9-A.... | 300 | 3890 |
| Perkins-Cullum Oil Co., S. B. Burnett 26, sec. 5 | 25 | 1365 |
| WILBARGER COUNTY— | | |
| Consolidated Oil Co., W. T. Waggoner 1-BB, sec. 1 | 35 | 1932 |
| Gibson-Jennings, Inc., Waggoner Est. 1, sec. 109 | 65 | 1704 |
| Humble, W. T. Waggoner Est. 23-H, sec. 46 | 2500 | 3091 |
| Phillips Pet. Co., W. T. Waggoner Est. 193, sec. 43 | 3000 | 3072 |
| YOUNG COUNTY— | | |
| Duncan & Marchman, S. R. Jeffery 1, sec. 198 | * | 1035 |
| Johnson & Mitchell, C. J. Taack 1, sec. 263 | * | 691 |
| Donald P. Kenyon et al, J. W. Davis 1, sec. 752 | * | 1801 |
| J. W. Lane et al, Pearl Rogers, 1, sec. 1496 | * | 988 |
| Welch & Crenshaw, A. B. Street 1.. | 35 | 3460 |
| Wooten & Wilson, S. L. Scott 6, sec. 345 | * | 752 |

*Failures; †Junked; ¶Million cu. ft. gas.

## *Want to use sweet gas for by-product*

**Austin.**—A permit to use sweet gas for the preparation of a product called "Gastex" was sought by General Atlas Carbon Company at a hearing before the Texas Railroad Commission last week.

Testimony of chemical engineers to the effect that the product is not produced by burning, but through the use of chemicals, was presented to support the contention that the company should be permitted to use the gas for this purpose.

Witnesses testified further that the company was able to obtain 11 pounds of "black," or "Gastex" per thousand feet of gas while manufacturers of carbon black obtained only one pound per thousand feet. The chemical properties of "Gastex" are such that it may not be substituted for carbon black in the manufacture of automobile tires or ink.

## *Penwell proration hearing*

**Austin.** — At a hearing before the Texas Railroad Commission last week the Sinclair Prairie Oil Company requested that the proration unit for the Penwell field, Ector County, be defined.

Paul McDermott, Sinclair attorney, said that an investigation of the commission's records disclosed no rule fixing the size of proration units, although the unit in use was 40 acres.

## *Completing second Seminole well*

**Midland.**—Shell Petroleum Corporation's M. J. Mann 1, C NW NW Section 220, Block G, east offset to the discovery oil well for the Seminole structure, Gaines County, was awaiting production test late last week after coring to 5060 feet, or 1712 feet subsea. First oil saturation was logged near bottom of core pulled at 5027 feet, and good porosity was noted in nominal recoveries made in coring to 5060 feet, which is close to the water level found by the original producer.

Shell Petroleum Corporation's test experienced difficulty with the 4900-foot gas. Seven-inch pipe was cemented at 4912 feet, but shallow gas from the Yates zone broke through behind the pipe. Formation tester used at 5017 feet, with packer set at base of casing showed 4,380,000 feet of dry gas. Cement squeeze job at 4912-5017 feet cut the gas volume down to 563,000 feet. Harry Adams Corporation's Averitt-Ohio 1-A, discovery producer, logged first oil stain at 4996 feet, and top of best saturation at 5011 feet, with an elevation of 3318 feet. It was deepened to water by intervals at 5048-5054 feet, and plugged back to 5032 feet for completion, with an initial flow of 200 barrels of 34.5 gravity oil and 1,000,000 feet of gas through 1-inch choke.

### Gaines Wildcat at 4400

Amon G. Carter and Continental Oil Company's Wasson 1, wildcat near the north line of Gaines County, was drilling near the 4400-foot level, having logged first lime stringer at 3830 feet, with an elevation of 3549 feet. Amerada Petroleum Corporation's Fasken 1, C NW NW Section 160, Block G, about 4 1/3 miles southeast of the Seminole discovery, has cemented surface pipe at 310 feet.

Illinois Oil Company, Ernest L. Wilson et al's Yellow House Ranch 1, southeastern Bailey County wildcat, was drilling near the 3900-foot level, having topped anhydrite at 2000 feet and first salt at 2090 feet, with an elevation of 3687 feet. Based on these markers it is about 100 feet lower structurally than a failure about 7½ miles to the east in Lamb County.

## *Texas Permits Increase*

**Austin.**—The Railroad Commission approved last week permits for drilling 505 new wells in Texas, 31 more than were allowed the week before.

North Texas reported 117 locations, the most from any one district. This included 45 in Young County, 31 in Archer County, and 22 in Jack County. There were 20 locations from West Central Texas with 11 in Shackelford County.

There were 75 locations from West Texas with 22 in Ector County and 15 in Winkler. The Panhandle listed 24 permits, including 10 in Hutchinson County.

There were 74 permits for wells in the East Texas field, including 42 in Gregg County, 16 in Rusk County, 10 in Upshur County, and six in Smith County. East Central Texas reported 58 locations with 11 in Cooke County and 11 in Titus County.

## WEST TEXAS

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| ANDREWS COUNTY (Means)— | | |
| Humble, J. S. Means 20 | 533 | 4532 |
| CRANE COUNTY (McCamey)— | | |
| Anderson & Miller, Durham 1 | * | 2555 |
| CRANE COUNTY (Gulf-McElroy)— | | |
| Gulf, J. T. McElroy 149 | 291 | 2985 |
| CRANE COUNTY (Sand Hills)— | | |
| Humble, J. B. Tubb 10 | 867 | 4435 |
| ECTOR COUNTY (Goldsmith)— | | |
| Atlantic, W. F. Cowden 3 | 673 | 4250 |
| H. E. Cummins 1-B | 341 | 4250 |
| H. E. Cummins 2-C | 871 | 4255 |
| Bond Oil Corp.-L. C. Harrison, TP Land Trust Co. 3 | 1173 | 4250 |
| TP Land Trust Co. 4 | 383 | 4255 |
| TP Land Trust Co. 5 | 890 | 4260 |
| Gulf, Goldsmith 17 | 1710 | 4208 |
| Goldsmith 19 | 2176 | 4216 |
| Landreth Oil Corp., C. Scharbauer 4-C | 816 | 4232 |
| C. Scharbauer 3-F | 1160 | 4221 |
| Penn Oil Co., C. Scharbauer 1 | 732 | 4215 |
| ECTOR COUNTY (North Cowden)— | | |
| Sun, O. B. Holt 1-C | 631 | 4310 |
| Stanolind, J. M. Cowden 44 | † | 4067 |
| HOWARD COUNTY— | | |
| American-Maracaibo Co., W. R. Settles 8-A | 535 | 2285 |
| Superior Oil Corp., D. Roberts 34-B | 1968 | 2976 |
| JONES COUNTY— | | |
| Sinclair Prairie, B. King 5-B | 219 | 2219 |
| PECOS COUNTY (Pecos Valley Field)— | | |
| W. H. Street et al, Pecos Valley 1 | ¶2 & 12 | 1645 |
| PECOS COUNTY (Yates Field)— | | |
| Ohio, Yates 55-A | 100,800 | 1535 |
| REAGAN COUNTY (Wildcat)— | | |
| Bahan & Rhodes, TP Land Trust Co. 1 | * | 3670 |
| REEVES COUNTY— | | |
| Grisham-Hunter Corp., C. Montgomery 1-A | * | 4065 |
| UPTON COUNTY (McCamey)— | | |
| British-American O. P. Co., Robbins 5 | 1054 | 2349 |
| Brown-Hancock-Hines Oil Corp., Baker 1-B | 200 | 2190 |
| Cordova Union Oil Corp., Fee 5-A | 230 | 2060 |
| Fee 6-A | 216 | 2051 |
| J. W. Ellis et al, Robbins 4 | 477 | 2131 |
| Gulf, E. S. Hughes 4-B | 283 | 2266 |
| Humble, R. P. Ricker 20 | * | 2207 |
| TP Coal & Oil Co., Reese 8 | 546 | 2637 |
| Weekley Oil Corp., Cordova Union 2 | 400 | 2063 |
| WARD COUNTY— | | |
| A. Bradford et al, Wathen-Sun 1 | 136 | 2210 |
| Gulf, Hutchings 76 | 825 | 2760 |
| Humble, University 15-F | 385 | 2757 |
| Reno Oil Co., Hardage-Willson 5 | 1014 | 2450 |
| Richardson Oils, Inc., University-Sun 2-B | 1047 | 2737 |
| Standard, (Texas), I. B. McFarland 8-37 | 2990 | 2650 |
| I. B. McFarland 11-37 | 1260 | 2650 |
| Walling-J. L. Costley 5 | 116 | 2525 |
| TP Coal & Oil Co., H. James 18 | 615 | 2480 |
| Tide Water Associated, Johnson 22 | 5400 | 2679 |
| WINKLER COUNTY (Henderson)— | | |
| Empire, Daugherty 2-E | 2500 | 3080 |
| WINKLER COUNTY (Kermit)— | | |
| Amerada, Daugherty 3-A | 732 | 2961 |
| Atlantic-J. C. Maxwell, Lovett 8 | 882 | 3150 |
| Eastland Oil Co., Roy Clapp 4-B | 1357 | 3102 |
| Roy-Clapp-Pure 6 | 991 | 3180 |
| Bert Fields et al, O. Clapp-Pure 8 | 1648 | 3115 |
| Gulf, Daugherty 36 | 927 | 3020 |
| Humble, N. R. Colby 3-B | 569 | 3030 |
| N. R. Colby 11-C | 897 | 3058 |
| W. A. McCutcheon 7 | 752 | 3015 |
| Magnolia, Walton 75 | 509 | 2920 |
| Walton 77 | 612 | 3282 |
| Walton 78 | 530 | 2928 |
| J. C. Maxwell, Inc., Gar-Tex O&G Co. 2-B | 682 | 3138 |
| Navarro Oil Co., F. S. Vaden 2 | 514 | 3050 |
| Shell, Ida Hendrick 4-K | 308 | 3095 |
| Ida Hendrick 4-M | 467 | 3095 |
| Skelly, N. R. Colby 6 | 980 | 3100 |
| WINKLER COUNTY (Keystone) | | |
| Continental Co., Walton 2 | 126 | 3370 |
| Richardson Oils, Walton-Humble 1-B | 146 | 3441 |

*Failures; †Junked; ¶Million cu. ft. gas.

***Campbell structure wildcat enters Glen Rose.***

* * *

***Opelika discovery temporarily abandoned.***

**Tyler.**—Stanolind Oil & Gas Compnay's Hawks 1, Trinity prospect on the Campbell faulted structure, Hunt County, entered the upper Glen Rose series at 4819 feet, and was drilling at 4900 feet late last week. This wildcat tested salt water in the Paluxy series topped at 4388 feet, thereby eliminating one of its best bets for production, since it is on the same fault trend as the Sulphur Bluff and Talco fields.

The discovery well of the Opelika area, Henderson County, has been placed on the temporary abandoned list by Tide Water Associated Oil Company et al pending the drilling of a second test on the McElreath-Suggett 149-acre tract. The original well is hooked up to a gas separator and tanks, and makes about 10 barrels of oil daily through an obstructed hole and a column of fresh water placed in the drill pipe. Owners elected to forestall any further expenditures on their original test until a second well is carried to the lower Trinity pay.

At 7195 feet in order to ascertain the thickness of the formation and value from a production standpoint, plugging orders were issued early last week for Tom Hunter, American Liberty Oil Company et al's Gage 1, Blackfoot area, Anderson County, after a drill stem test at 9150-9205 feet showed 890 feet of salt water with an odor of distillate. It penetrated the lower Glen Rose to sufficient depth to condemn the formation for production.

In the Long Lake field, Tide Water Associated Oil Company and Seaboard Oil Corporation's Monnig 7 was coring at 9725 feet, and making drill stem tests at intervals. It is likely to be carried to 10,000 feet.

The lower Trinity series has been reached by Mrs. S. O. Thompson, Jaffe et al's Rosemond 1, located 3 miles southwest of Red Water, Bowie County, and progress is being followed closely by a large number of operators. Massive anhydrite formation was logged at 5463-5701 feet, with an elevation of 285 feet, and late last week a core was being taken at 5750 feet.

Bottom hole pressure decline rate in the East Texas field amounted to 2.85 pounds during the month ending May 12, according to survey conducted by engineers of the Texas Railroad Commission. This drop is a fraction of a pound less than that reported for the previous 30-day period, and the average reading on 34 key wells was 1164.76 pounds on May 12. Engineers are credited with having made pressure readings on 100 wells, uniformly distributed over the field, but used the 34 original key wells in striking an average for the field.

Number of sub-marginal wells in the field have recorded a substantial gain in recent months. Current records of the commission reveal that 168 wells can not produce the minimum quota of 20 barrels daily, and the output of these wells range from a fraction to 19½ barrels daily. Nine Majors reported 74 of the sub-marginal wells as being on their properties. Recent prose-

### Texas June Allowables by Fields
**(Barrels daily)**

| Field | May 1 | June 1 | |
|---|---|---|---|
| Jack (South ½) | 8,545 | 9,000 | + 435 |
| Cowden, North | 7,955 | 7,241 | — 714 |
| Estes | 8,873 | 7,890 | — 983 |
| Gulf-McElroy | 4,254 | 3,573 | — 681 |
| Henderson | 4,389 | 3,915 | — 474 |
| Howard-Glasscock | 16,815 | 15,706 | —1,109 |
| Iatan-East Howard | 7,336 | 6,559 | — 777 |
| Kermit | 19,664 | 18,712 | — 952 |
| Keystone | 3,208 | 2,810 | — 398 |
| Penwell | 6,122 | 5,491 | — 631 |
| Ward, North | 9,265 | 8,228 | —1,037 |
| Ward, South | 16,714 | 15,655 | —1,059 |
| Yates | 30,619 | 25,166 | —5,453 |
| Cayuga | 7,822 | 7,181 | — 641 |
| Rodessa | 40,583 | 35,068 | —5,515 |
| Talco | 22,273 | 25,725 | +3,452 |
| Van | 36,881 | 31,110 | —5,771 |
| Luling Branyon | 8,111 | 8,699 | + 588 |
| Dirks | 3,703 | 3,323 | — 380 |
| Greta | 13,576 | 11,790 | —1,786 |
| Placedo | 7,555 | 6,764 | — 791 |
| Pettus | 1,330 | 1,016 | — 314 |
| Tom O'Connor | 11,725 | 10,240 | —1,485 |
| Refugio (New) | 3,332 | 3,672 | + 340 |
| Comitas (Haynes) | 2,433 | 1,867 | — 566 |
| Government Wells (North | 10,313 | 9,776 | — 537 |
| Loma Novia | 16,963 | 16,476 | — 487 |
| Plymouth | 13,280 | 11,325 | —1,955 |
| Sam Fordyce | 6,034 | 5,422 | — 612 |
| Saxet New Deep | 4,297 | 3,805 | — 492 |
| Saxet Shallow | 10,808 | 9,386 | —1,422 |
| Saxet Frio | 15,708 | 14,243 | —1,465 |
| Taft | 3,732 | 3,366 | — 366 |
| Anahuac | 13,449 | 12,189 | —1,260 |
| Barbers Hill | 12,409 | 13,600 | +1,191 |
| Conroe | 43,917 | 39,451 | —4,466 |
| Goose Creek | 3,021 | 2,421 | — 600 |
| Hastings | 13,135 | 12,463 | — 672 |
| Manvel Miocene | 5,164 | 4,584 | — 580 |
| Manvel Oligocene | 4,689 | 4,071 | — 618 |
| Markham | 1,802 | 1,279 | — 523 |
| Mykawa (New) | 1,992 | 1,612 | — 380 |
| Pickett Ridge | 2,338 | 1,997 | — 341 |
| Pierce Junction | 4,793 | 3,521 | —1,272 |
| Raccoon Bend | 2,653 | 2,288 | — 365 |
| Segno | 337 | 683 | + 346 |
| South Houston | 5,950 | 5,184 | — 766 |
| Sugarland | 4,491 | 3,732 | — 759 |
| Thompson | 13,132 | 11,268 | —1,760 |
| Tomball | 8,705 | 8,360 | — 345 |

cution of independents by federal authorities for false affidavits in rendering monthly reports on production, where sub-marginal wells were involved with the deficit made up by more productive wells, resulted in the filing of more accurate production reports. The convictions also caused some operators to switch lease connections to pipe lines engaged in intrastate traffic exclusively in order to evade the monthly reports to the federal tender board.

Field operations have held steady for some weeks with the number of active rigs ranging from 70 to 80. Completion report for the current week accounts for 49 wells, and three failures on the northwest flank of production in Upshur County.

Reduced allowable slated for nearly all important oil areas within the state beginning June 1 will not apply to the East Texas fields, which has been prorated on a basis of 2.32 percent of the rated hourly flow since June 21, 1936. Production allowable on May 18 amounted to 461,303 barrels daily from 22,702 wells, including 17,141 marginal and sub-marginal wells. On the latter date there were 45 inactive wells, according to commission's records.

## *Colonel Thompson goes to Paris congress*

**Washington, May 20.**—The state department on May 20 announced additional members of the United States delegation to the Second World Petroleum Congress to be held at Paris, June 12 to 20, the added delegates being Colonel Ernest O. Thompson of the Texas Railroad Commission, J. Elmer Thomas of Houston, Wark Kelley of San Antonio, and H. F. Worley and Edward H. Moore of Tulsa.

D. E. Buchanan of Hanlon & Buchanan, Inc., Tulsa, was named as chairman of the delegation by the department on April 12, at which time other members of the group were named as follows: Herbert Baxley, Socony-Vacuum Oil Company, New York; William M. Brewster, managing director of Raffineries de Petrole de la Gironde, Paris; W. D. Crampton, Standard Oil Company of New Jersey, Paris; H. A. Hassan, Sinclair Refining Company, Paris; Charles E. Lanning, American Petroleum Institute, London, and Wallace Pratt, Humble Oil & Refining Company, Houston, as representatives of the oil industry.

Other members of the delegation are Colonel James Gordon Steese, Guajillo Corporation, San Antonio, Texas; C. B. Veal, Society of Automotive Engineers, New York, and Charles W. Wright, vice consul at Vienna.

## *Robert M. Sands Dies*

**Los Angeles.**—Robert M. Sands, aged 60 years, president of Petroleum Securities Company and associate of the late Edward L. Doheny, died suddenly May 21 at Harwich, England, as a result of a heart attack. He had attended the coronation and planned a two months vacation. He was accompanied by his wife, a daughter, a son and Mr. and Mrs. Olin Wellborn, Jr. Sands has been associated with the Doheny interests for 21 years.

## *Converse test drilled to 5700 feet*

**Shreveport.**—Kirk-Greenway Drilling Company, operating for Deep Rock Oil Company, last week was running electrical tester, after reaching contract depth of 7500 feet in Whitney Corporation 1, NW NW 8-9n-13w, Sabine Parish, Glen Rose test in the shallow Converse field. This well offsets Laurel Petroleum Company's Whitney Corporation 1 in the same section that had a good oil saturation at 5503 feet and was lost after a gas blow-out and the well threatened to crater.

On the west side of Converse outside production Pearl Oil Corporation of Houston staked location for Brown 1, SW NW 16-9n-13w, and Windsor Oil Company made location for Elliott 1, NW NW 17-9n-13w.

Pearl Oil Corporation, which recently sold 51 percent of its block around a test it drilled to 3000 feet, Joyner 1, Section 28-11n-12w, DeSoto Parish wildcat, to Superior Oil Company has let contract to deepen this test to 5000 feet.

## *Gasoline manufacturers meet*

**Tulsa.**—How natural gasoline manufacture, crude oil stabilization and crude oil production are tied into one operation was outlined before the annual meeting of the Natural Gasoline Manufacturers Association of America at its annual convention here May 19, 20 and 21. E. O. Bennett and C. R. Williams explained operations of Continental Oil Company, operators of the Tepetate field, southern Louisiana.

The program was devoted largely to technical phases of gasoline plant operation and economics of this phase of the industry.

# EAST TEXAS
## Completions

| Company, Well and Location. | Init. Prod. Bbls. | Depth. |
|---|---|---|
| JOINER AREA— | | |
| Atlantic Ref. Co., Ida Kinney 42 (336-ac) | 1500 | 3652 |
| W. H. Gant-Garvin-Wegener, J. Simmons 7 (54.46-ac) | 750 | 3599 |
| Humble, J. E. Glover 19 (132½-ac) | 4000 | 3776 |
| Overton Ref. Co., A. L. Townes 1 | 4000 | 3756 |
| Regent Oil Co., L. Harmon 8-B (5.6-ac) | 8000 | 3780 |
| Royall Pet. Corp., Bunker Hill School 1 (1-ac) | 75 | 3715 |
| Sinclair Prairie, G. Patterson 14 (164.33-ac) | 3400 | 3675 |
| Standard Oil Co. (Kan.), J. E. Wheelis 8 (40-ac) | 6000 | 3797 |
| Stanolind O&G Co., W. O. Alford 15 (99.35-ac) | 6200 | 3737 |
| R. G. Mason 15 (108.24-ac) | 3600 | 3620 |
| Sun Oil Co., P. Henderson 1 (20-ac) | 750 | 3726 |
| Tide Water Associated, M. Thompson 11-A (74.71-ac) | 960 | 3684 |
| KILGORE AREA— | | |
| Atlantic & Byrd-Frost, Inc., R. Whaley 13 (71.4-ac) | 8500 | 3705 |
| Brothers Oil Co., S. E. Brox 3 (10-ac) | 7000 | 3690 |
| L. W. Callender et al, W. B. Walker 17-A (174.3-ac) | 250 | 3612 |
| F. E. Corbin et al, R. A. Motley 1 | 15 | 3729 |
| Gulf Oil Corp., H. Baton 10 (56.73-ac) | 360 | 3657 |
| Humble, J. E. Glover 19 (132½-ac) | 4000 | 3776 |
| W. D. Peterson 15 (97¼-ac) | 3600 | 3637 |
| Thos. D. Humphrey, A. Spear 4-B (22-ac) | 7000 | 3539 |
| Hurricane Oil Co., H. Alexander 6 (25-ac) | 1200 | 3628 |
| L. P. & B. Oil Co. (was Artic Oil Co.) J. S. King 2 (2-ac) | 5500 | 3663 |
| D. L. Johnson & Olson Bros., J. S. Powers 16 (132-ac) | 9000 | 3720 |
| Magnolia, W. P. Moore 18 (152-ac) | 11,000 | 3648 |
| John Radford 35 (252-ac) | 3600 | 3649 |
| Martex Oil Co., A. L. Still 7-B (39.13-ac) | 150 | 3530 |
| Shell, B. F. Laird 29-A (211.31-ac) | 9200 | 3544 |
| J. H. Spivey 16 (102.45-ac) | 8400 | 3712 |
| D. Wills 6 (85.09-ac) | 3500 | 3604 |
| Southport Pet. Co., I&GN Ry. 4, Tr. 4 (3.02-ac) | 250 | 3571 |
| Sutton & Hawkins, G. H. Blackmon 2 (12¾-ac) | 720 | 3687 |
| The Texas Co., R. B. Walls 15 (104¾-ac) | 7200 | 3702 |
| Tide Water Associated, C. O. Christian 17 (117-ac) | 11,500 | 3720 |
| M. B. Hughey 33 (200-ac) | 6400 | 3520 |
| Weaver-Crim Corp., Ben Laird 16 (82-ac) | 4800 | 3583 |
| LONGVIEW AREA— | | |
| Amerada Pet. Corp., C. Bumpas 16 (98.3-ac) | 12,000 | 3588 |
| Bridwell Oil Co., O. Lockett 4 (27-ac) | 9000 | 3640 |
| O. R. Cooper et al, M. E. Florence 6 (40-ac) | 840 | 3776 |
| Creighton Drl. Co., J. Hargrave 5 (40-ac) | 1500 | 3727 |
| Danciger Oil & Ref., Inc., T. B. Stinchcomb 11 (87½-ac) | 1200 | 3855 |
| Fain-McGaha Oil Corp., W. A. Bauknight 11 (53.4-ac) | 8800 | 3638 |
| Gulf, A. V. Bacle 13 (69¾-ac) | 8700 | 3645 |
| Roger Lacy et al, C. W. Castleberry 1 (50-ac) | 3000 | 3604 |
| C. A. Lee et al, Mrs. E. L. Walker 2 (4.43-ac) | 500 | 3597 |
| L. & G. Oil Co.-Joe Papadakis, F. W. Knickerbocker 2 (50-ac) | * | 3752 |
| Monte Oil Co., W. F. Smith 7 (50-ac) | 3000 | 3697 |
| Mudge Oil Co., J. D. Richardson 4-B (32.9-ac) | 6800 | 3740 |
| Rajo Oil Corp., J. C. Barrett 11 (80-ac) | 2000 | 3638 |
| M. C. Salter et al, Fee 1 (12-ac) | | |
| Tide Water Associated-Russ Pet. Co., Flewellen 27 (210.9-ac) | 1200 | 3724 |
| J. K. Wadley et al, Mrs. E. Florence 2 | 1800 | 3734 |
| H. B. Owens 1 | * | 3718 |
| ANDERSON COUNTY (Long Lake Field)— | | |
| C. L. Mahaney et al, W. S. Price 1 (22-ac) | 2000 | 5355 |
| Southport Pet. Co.-A. P. Cary, I&GN Ry. Co 1 (102.1-ac) | 273 | 5310 |
| Tide Water Associated-Seaboard Oil Corp., Murray 1-B (105-ac) | 500 | 5340 |
| Mrs. P. Smith 1 (87.78-ac) | 300 | 5348 |
| FRANKLIN COUNTY (Talco Field)— | | |
| Byrd-Frost, Inc., et al, E. L. Phillips-Gulf 1 (400-ac) | 261 | 4298 |
| HENDERSON COUNTY (Cayuga Field)— | | |
| Fred M. Allison Prod. Co.-Cortex, Pettiette-Rio 2 (99¼-ac) | 3400 | 4094 |
| TITUS COUNTY (Talco Field)— | | |
| Byrd-Frost, Inc. et al, R. H. Harper-Gulf 4 (40-ac) | 300 | 4229 |
| Hollingsworth Drl. Co. J. M. Morris-Atlantic 3 (20-ac) | 200 | 4325 |
| Humble, Pat Davis 3 (49.8-ac) | 343 | 4343 |
| John Hargrave 1-B (1.33-ac) | 300 | 4337 |
| A. P. King 37 (1053-ac) | 306 | 4321 |
| Magnolia, K. Mainard 7 (130¾-ac) | 349 | 4288 |
| Tide Water Associated, C. M. Carr 2 (74.37-ac) | * | 2817 |
| VAN ZANDT COUNTY (Van Field)— | | |
| Stroud & Lowe, J. E. Crim 1 (43-ac) | 2 | 1262 |
| G. J. Luther 1 (32-ac) | 1 | 1151 |
| ANDERSON COUNTY— | | |
| Tom Hunter, American Liberty Oil Co., Gage 1 | * | 9205 |
| HENDERSON COUNTY— | | |
| Tide Water-Seaboard-Humble, McElreath-Suggett 1 | 10 | 7195 |
| HOUSTON COUNTY— | | |
| C. & G. Oil Co.-Duval Williams, E. M. Young 1 | * | 2217 |
| LAMAR COUNTY— | | |
| Cooper Bros. & Sallee, L. P. Hayes 1 | * | 2768 |
| CASS COUNTY (Rodessa)— | | |
| Magnolia, Haywood 14, Priscilla Evans sur | 480 | 6035 |
| R. W. Norton, Davis 6, H. Holbert sur | 488 | 5990 |
| Arkansas-Louisiana Gas Co., George 1, Wm. R. Meyers sur | ¶70 | 5980 |
| MARION COUNTY (Rodessa)— | | |
| Hunter Co., E. W. Fonda 1, A. de los Santos Coy sur | 283 | 6096 |

*Failures; †Junked; ¶Million cu. ft. gas.

# SOUTH TEXAS

***Zavalla County's first well rated at 5000 barrels.***

* * *

***Lease play may forecast Refugio County Revival.***

* * *

***Immediate development program planned for Sweden.***

**San Antonio.**—Zavalla County's new oil field, first for the county, apparently will be of gusher proportions. First gauges on H. F. Wilcox's T. J. Gilliam 1, six miles northeast of Batesville, indicate that its initial flow from the Edwards limestone at 3941-47 feet will be calculated at possibly 5000 barrels per day or more.

The test was opened for three consecutive 30 minute flowing tests through the open casing, the first showing 50 barrels, second 84 barrels and the third 94 barrels of oil with only a slight cut of water. The oil, which had been standing several hours showed a gravity of 20 degrees at 99 degrees and 18 degrees at 81 degrees. This correction is rather inconsistent, hence either may be incorrect. Other reports are that the oil tested 28 degrees when produced from the well in its very hot condition, estimates on the well temperature being up to 130 degrees.

This well drilled into the limestone with cable tools, blew out and bridged. The 8½-inch casing was pulled to recover the line and tools and reset at 3100 feet. A string of 7-inch pipe then was landed to 3930 feet on a shoe. the well coming in after about 1000 feet of fluid had been lifted via the swabbing method. Efforts then were made to kill the well to cement the pipe, but all efforts failed, the result being that the test will be completed with the pipe merely landed on the shoe.

Storage was reported to be under construction late in the week and accurate gauges likely will be available during the next several days. Tubing probably will be snubbed in under pressure.

### An Important Find

The discovery is looked upon as one of the most important in the history of the South Texas area. It opens an entirely new oil producing district for development, which possibly will develop into a major reserve. The discovery itself, may or may not be the key to a major field, but the presence of oil in such large quantities anywhere along this sector of the Balcones fault zone in the Edwards limstone suggests the establishment of a highly important producing trend.

The only other Edwards limestone production thus far found outside of the immediate Luling district of Caldwell and Guadalupe Counties has been in this general area. Recently, Amerada Petroleum Corporation's Halff and Oppenheimer 8, in the Pearsall field,

***See Map—Page 71***

Frio County, flowed 182 barrels of fluid, 32 percent salt water and the remainder 37.9 gravity oil per day from the limestone at 6230 feet. The test, however ,is being carried ahead, at this time at 9892 feet in the Glenrose sandstone, and is projected to the Trinity. This test is about 14 miles southeast of the new Wilcox strike.

About 50 miles to the southwest of the Wilcox producer, Rycade Oil Corporation found oil in the Edwards limestone several years ago. Chittim 3 in the Chittim field, Maverick County, drilled to 3206 feet in the Edwards limstone with a 10-inch hole. The well blew out at 3 o'clock in the afternoon and flowed by heads until 10 o'clock the next morning when it was successfully shut in. The test then was allowed to produce, making an average of 150 barrels of 44 gravity crude per day.

The important facts brought to light in the three wells is the gravity of oil. The Pearsall structure generally is classified as being an island type proposition in a regional low, with its Edwards production coming from the flanks of the structure. The oil is 37.9 gravity. The Chittim well produced from a porous zone on top a large northwest-southeast anticline, with oil being 44 gravity. The new producer is giving forth 18 gravity oil from a structure said to be either a faulted proposition or a monocline along the south side of the main Balcones Fault System. The crude from the new well, likewise, is very heavy, has no gasoline content, lacks natural gas and is high in asphalt. It is very black and unusually thick.

While none of the above areas likely have any definite structural relation, their oil apparently is drawn from the same tremendous drainage area, embracing hundreds of thousands of acres to the south and southeast. It is this reason in part that the great variance in the grades of crude cannot be explained.

The Wilcox organization, including H. F. Wilcox and Wilcox Oil & Gas Company, hold approximately 12,600 acres around the well. Several major companies, including Magnolia Petroleum Company and Humble Oil & Refining Company, as well as a number of independent operators have vast lease holdings and royalty interests in the general area. Considerable leasing has been underway in the district since the strike, several deals carrying immediate drilling obligations.

## *Going after deep oil*

**Corpus Christi.**—Immediate development of South Texas Gulf Coast oil reserves below 7000 feet is seen with more tests deeper than this level active at this time than ever before in the history of the territory. Two fields have sands productive below 7000 feet and two more areas are attempting to establish oil production below 8000 feet. All of the discoveries have been during the past few weeks.

Probably the key well along the South Texas Coastal area at this time is United Production Corporation's J. J. O'Brien 12, in a 100-acre tract in the Refugio Townsite Survey, in the Refugio field. The test has been drilled to 8357 feet, where a string of 7-inch casing has been set, the hole to be drilled materially deeper.

Edwin M. Jones' J. Mitchell test, drilled several years ago as the first test in South Texas below 9000 feet, encountered a series of oil and gas sands, numbering at least 25, the last being to 9131 feet, where completion was attempted. The well failed due to mechanical difficulties and ultimately was abandoned. The important fact however, is that it did find several highly important shows in the 8000-9000-foot bracket.

### Trades Forecast Development

Considerable acreage in the general district was included in trading during the past few months in this sector of Refugio County, possibly because of the proposed plans for the deep operation. The old field apparently is nearing the depletion point from present known sands, but the structure is large, and development of deeper sands may place the district again in the list of leading producing fields of the South Texas Gulf Coast.

At Lamar, in Aransas County, Barnsdall Oil Company's Kate Edwards 1-A was coring at 7967 feet, nearing the depth at which Kate Edwards 1 blew out and ran wild, producing considerable gas, some oil and salt water. The first well struck drill stem at 7997 feet and was abandoned following the blowout.

McCampbell field, Aransas County, has developed production at 7100 feet. Another horizon at 7300 feet gives promise of producing, but no well has been completed at this level as yet.

### Nueces County

In Nueces County, one producing level in the Saxet field is several feet short of the 7000-foot level, several of the wells in the field having shown both oil and gas down to near 8000 feet. The Flour

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Bluff field, same county, had one well carried below 7000 feet and it showed oil, gas and salt water.

United Production Corporation's Harvey 1, west of production in the Agua Dulce field, Nueces County, drilled to 9002 feet, plugged back and perforated at 7375-84 feet and flowed 125 barrels of fluid of which 80 percent was salt water and the remainder 40 gravity oil, the flow being through ⅛-inch choke the pressures 2600 pounds on tubing and 3250 on casing. The well is now being reworked.

The same county had another discovery, being a new sand in the London field. Cosner & Cosner's M. L. Stockton 2, SE SW NE Section 25, flowed 45 barrels of distillate, 5 million cubic feet gas per day through ¼-inch choke from 4906 feet. The well logged gas sand 4896-5901 feet, distillate sand to 4906 feet and set casing on bottom, the completion being through perforations.

Placedo field of Victoria County was receiving a deep test in Barnsdall Oil Company and American Liberty Oil Company's J. M. Pickering 10, Lot 1, which drilled to 6785 feet and is now waiting on cement.

Magnolia Petroleum Company is scheduled to go to at least 9000 feet in A. A. Seeligson 7, southeastern Jim Wells County. The test, located in the Los Jaboncillos Survey, set 996 feet of 13⅝-inch casing.

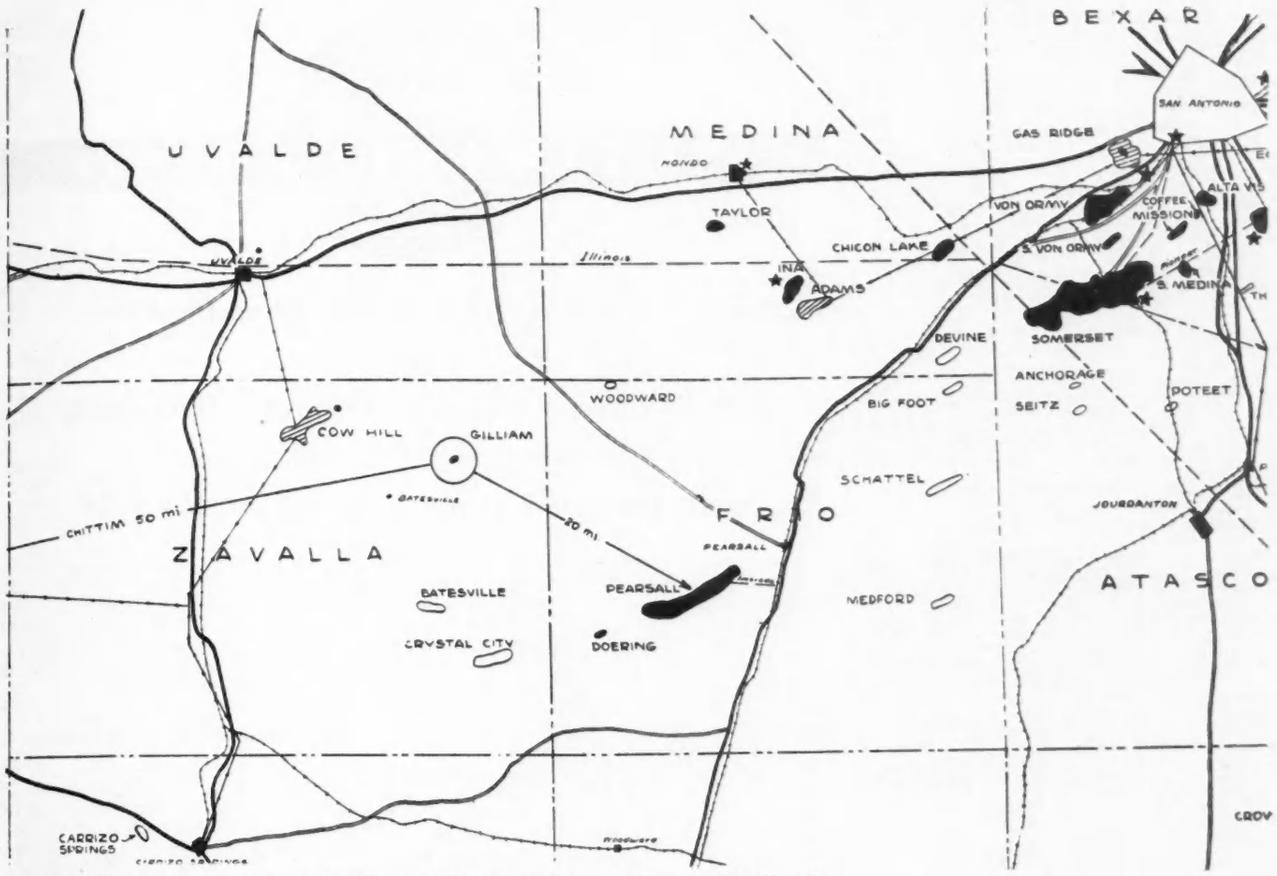
## *Sweden district work encouraged by completions*

**San Diego.**—Sweden district, Duval County, comes in for an immediate development program as the producing area is further expanded through completions in several sands. Ten active operations were reported as the week closed with the possibility of several more being commenced shortly.

Highland Oil Company's A. Farias 1, ½-mile northwest of the North Field's discovery well, was reported flowing considerable oil and wash water from sand at 4795-4804 feet, but no gauge was available. The well, located SE NE Section 9, logged the discovery sand 17 feet lower than the first well and flowed in 23 minutes on drill-stem test.

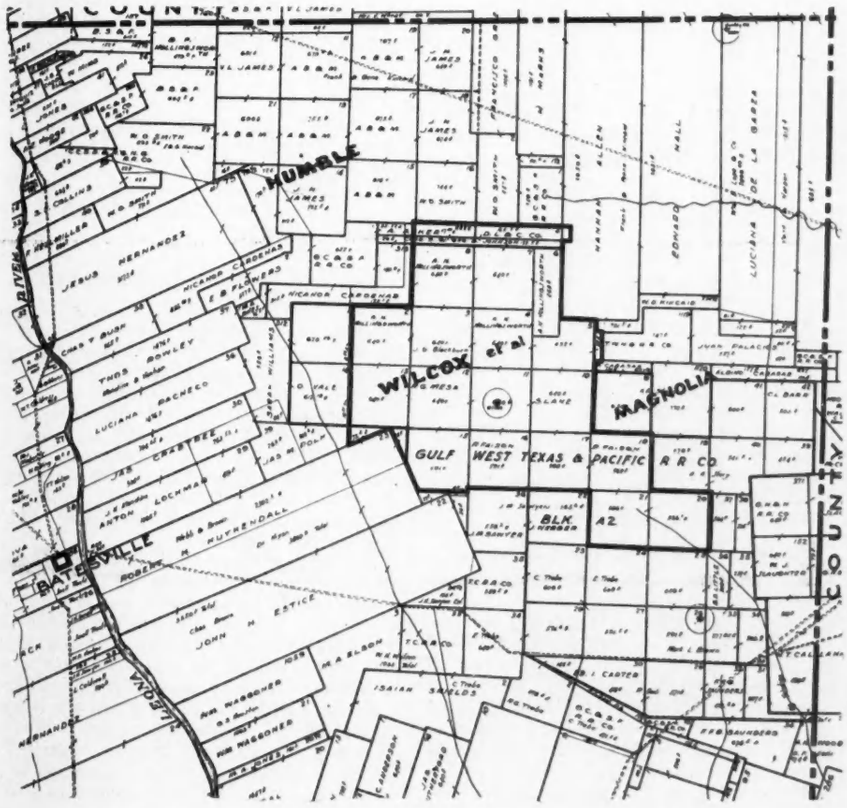
Northeast of this test, Parr Oil Company's F. Vaello was coring for the sand, while Hiawatha Oil & Gas Company's F. Vaello 1, south offset, was runing a drill-stem test on the 4800-foot sand. Records were not available, but is was said to be several feet higher structurally than the test to the north. Derricks were up for Argo Oil Company's Juan Carrillo and Arkansas Fuel Oil Company's Mabel Rossi, west offsets to the above tests. Reynosa Oil Company's Miller, ¼-mile west of the north producing area, is drilling at a shallow depth.

Hiawatha Oil & Gas Company obtained unfavorable results in George Herberger 2, Section 14, northeast of the main field's discovery well, when tested through perforations at 5075-80 feet. New perforations will be made slightly lower. This test showed considerable oil and gas on drill-stem test when the sand at 5072-91 feet was first drilled. It was carried ahead to 5914 feet, then plugged back. One mile farther east, King Drilling Company is moving in material for Atlee Parr 1, which is to be commenced before June 1.




**Regional Map shows location of Wilcox Oil & Gas Company's new Zavalla discovery in relation to other development in Southwestern portion of Texas. It indicates the large area opened to prospective development.**

**Below is an outline of the Wilcox block in northeastern Zavalla County; also location of new producer.**




## SOUTH TEXAS
## Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| **SAN ANTONIO DISTRICT** | | |
| ATASCOSA COUNTY— | | |
| Helvetia Oil Co., Susie Pratt 2 176-ac tr, F. de la Garza sur... | * | 3460 |
| BEXAR COUNTY— | | |
| Rogers Putnam, Simon Wetz 7, J. Simpson sur (Von Ormy) ..... | 4 | 637 |
| CALDWELL COUNTY— | | |
| Adolph Dovre, M. W. Calliham 1A, Dillard Cooper sur (Branyon) .. | 50 | 2235 |
| Memphis Nat'l Gas Co., J. M. Young 2, John R. Miller sur (Branyon). | 1375 | 2142 |
| LEE COUNTY— | | |
| James E. Pederson. C. A. Turner 1, 65-ac tr, David Hudson sur... | * | 6560 |
| REAL COUNTY— | | |
| Sun, Dietert & Oppenheimer 1, sec 7, GWT&P RR. sur..... | * | 5956 |
| WILLIAMSON COUNTY— | | |
| Taylor Ref. Co., Walter R. Heap 8-B Hamiliton White sur, (Byersville). | 85 | 860 |
| **LAREDO DISTRICT** | | |
| DUVAL COUNTY— | | |
| N. V. Duncan, Worden & Drought 8, sur 151 ..... | 100 | 1540 |
| Hiawatha O & G Co., Southland 2, sec 15, Ball Ranch Sub. Santos Flores Gr. ..... | ¶15 | 5939 |
| Humble Roos Brothers 1, sur 119... | 50 | 2871 |
| Humble, J. F. Welder 22-C sec 554, (Loma Novia) ..... | 165 | 2689 |
| Magnolia, Servando Benavides 26, blk 26 O'Hern & Seacord Sub. (Cole-O'Hern) ..... | 75 | 2874 |
| Magnolia, Duval County Ranch Co. 2, sur 203 (Piedre Lumbre)..... | 170 | 1975 |
| Ralph R. Odgen et al, Ruiz Est 2-B, sur 41, (Loma Novia)..... | 50 | 2582 |
| J. V. Redick, Bishop Cattle Co. 1, sur 57, (Loma Novia)..... | * | 2593 |
| Texas Co., DCRC 22, sur 100..... | 75 | 1985 |
| McMULLEN COUNTY— | | |
| H. K. Boysen, J. E. Murphy 1, J. E. Murphy sur No. 480..... | * | 2354 |

[*Continued on next page*]

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| WEBB COUNTY— | | |
| C. H. Bailey, D. G. Garcia 1, sur 786, (Killam) | 100 | 2040 |
| Glenn Harroun, A. Lopez 2A, sec 110, (Lopez) | 75 | 2269 |
| O. W. Killam, A. M. Bruni 51, sur 8, (Cole-Bruni) | 465 | 3431 |
| Radliff Killam, Garcia & Villareal 1, sur 1099, (Killam) | 175 | 2008 |
| Mortimer & Springer, Maria L. Lopez 16B, sec 112, (Lopez) | * | 2074 |
| Mortimer & Springer, Maria L. Lopez 16B (second hole), sec 112, (Lopez) | 500 | 2250 |
| Locke Purnell & Cole Pet. Co., Rosa Benavides 1, sur 721, 10 mi n of Bruni | * | 3508 |
| Smith & Hamill, S. Benavides 1A, blk 301, Myrtle E. Hale sub, (Cole-O'Hern) | 485 | 2891 |
| Sun, S. Benavides 11, B 444, Myrtle E Hale sub, (Cole-O'Hern) | 175 | 2949 |
| Superior Oil Co., W. C. Billings 19, sur 109 (Lopez) | 425 | 2280 |
| Superior Oil Co., W. C. Billings 20, sur 109 (Lopez) | 190 | 2284 |
| ZAPATA COUNTY— | | |
| Earl Callaway, Elvira B. de los Santos 13, Fansler Partition (Escobas) | * | 1389 |
| Magnolia, Gonzales-Cuellar 4, Cuellar tr, (Cuellar) | ¶5 | 1757 |
| Nordan & Morris, C. Bustamante 4, Fansler Part, (Escobas) | 32 | 1257 |
| Nordan & Morris, C. Bustamente 6, Fansler part, (Escobas) | 43 | 1242 |
| E. C. Reeves, M. Bustamante 1A, Fansler part, (Escobas) | 15 | 1166½ |
| Texas Pipe & Supply Co., M. Bustamente 3, Fansler part, (Escobas) | 48 | 1192 |
| **CORPUS CHRISTI DISTRICT** | | |
| ARANSAS COUNTY— | | |
| Atlantic, E. V. Murray 1E, sec 38 (McCampbell) | ¶10&15 | 6552 |
| CALHOUN COUNTY— | | |
| Portilla Dr. Co., P. H. Welder 7, Agaton Sisneros sur, (Heyser) | 450 | 5496 |
| JIM WELLS COUNTY— | | |
| Diamond Half Oil Co., Mary B. Thirkill 2, sec 77 (Premont) | 175 | 2256 |
| Tom Graham & Gilcrease Oil, C. M. Laughlin 4B, sec 77, (Premont) | * | 2262 |
| LIVE OAK COUNTY— | | |
| Empire Fuel & Standard Co. of Texas, George West 1, lot 107, blk B, Geo. West sub | * | 3051 |
| NUECES COUNTY— | | |
| Lonnie Glasscock, Kansas Life Ins. Co. 1, sec 196, Luciano Rivers sur, Ab 287 | * | 6030 |
| Hiawatha O&G Co., F. J. Smith 4B, sur 500, (Saxet) | 425 | 5842 |
| Humble & Barnsdall, Josie Miller 5-A, lot 18, blk 56 (Flour Bluff) | 500 | 6655 |
| R. A. Thompson et al 1B, lot 10, sec 55, (Flour Bluff) | 750 | 6667 |
| Magnolia, Sevier 3, E. Russell sur (Clara Driscoll) | 220 | 3880 |
| North Star Oil Corp., Rand-Morgan 11-E, sec 405, (Saxet) | 950 | 6939 |
| Richardson Pet. Co., Cain & Sechrist 16, J. C. Russell Farm Lots (Saxet) | 785 | 4451 |
| Texon Drilling Co., Anton Ocker 6, J. Ward sur (Saxet) | 725 | 4439 |
| L. M. Vance 5, Thomas Gallagher sur, (Saxet) | ¶20 | 7000 |
| Sam Wilson, Jr., Koepke 1, Villareal Gr. (Saxet Heights) | 85 | 4075 |
| REFUGIO COUNTY— | | |
| Hewitt & Dougherty, M. F. Lambert 45, Swisher sur 7, (Tomoconnor) | 1650 | 5905 |
| Houston Oil Co., F. B. Rooke 31, T. Mullen Gr., (Refugio) | 825 | 4917 |
| VICTORIA COUNTY— | | |
| Commonwealth O&G Co., W. H. Bennett 4, J. E. Galban sur, (Heyser) | ¶20 | 5491 |
| Costa Oil Co., J. E. Schovajsa 1-C, Rupley sur, (Placedo) | 70 | 4780 |

*Failures; †Junked; ¶Million cu. ft. gas.

## *Geologists trounce scouts at New Braunfels*

**San Antonio.** — Approximately 300 members and their guests attended the joint picnic of the South Texas Geological Society and Southwest Texas Oil Scouts Association was held last week at Landa Park in New Braunfels.

The outing featured the annual baseball game between the geologists and scouts. The former won by a rather top-heavy score. It was followed by a barbecue.

# TEXAS GULF COAST

***Perforate for test of 9850-foot sand at Buckeye.***

* * *

***Stanolind's Clinton extension attempt to test soon.***

* * *

***First well completed in south part of Amelia field.***

**Houston.** — Wildcat operations and extensions to proven fields in the Texas sector of the Gulf Coast continued the center of interest dispite the fact that no major reserve has been found in the district since the first of the year.

Three miles southwest of Buckeye, Matagorda County, United North & South Development Company's C. Q. Stoddard 1, J. B. & M. Cotton Survey Abstract 17, after perforating with 30 holes from 9769 to 9782 feet, showed salt water. Cement was squeezed through the perforations and at the end of the week the operators were preparing to perforate between 9380 and 9850 feet for another production test.

### Skelly Gets Another at Van Vleck

At Van Vleck field, Magnolia County, Skelly Oil Company completed another good producer in the 7495-foot sand. Moore 2, I. & G. N. Survey, Section 10, abstract 267, was completed making 711 barrels of 37.1 gravity oil daily through a quarter-inch choke, with a tubing pressure of 1225 pounds and a casing pressure of 1300 pounds. Top of the oil sand was logged at 7473 feet.

In Wharton County, Sam G. Harrison's Harfast 1, approximately 7½ miles north of Louise field, L. Conkrite Survey, was abandoned in shale at 5018 feet after logging salt water sand at 3852 feet.

Approximately 1800 feet east of production at Five Corners, Wharton County, The Texas Company was preparing to kill Pierce Estate B-7 to cement off bottom portion of the sand and shut off the water flow. Pierce Estate B-7, J. Caldwell Survey, was drilled and cored to 5555 feet in sand showing oil after logging top of the sand around 5546 feet. Seven-inch casing was cemented at 5545 feet. Oil, gas, and 50 percent salt water was found from 5505 to 5555 feet.

### Sandy Point Well to Set Casing

North of the discovery well at Sandy Point, Brazoria County, Florence Investment Company's Fite 1, D. Talley Survey, was preparing to set casing at the end of the week after drilling to 6568 feet in salt water sand. Top of the water sand was logged at 6536 feet. It is believed gas sand cored from 6457 to 6474 feet will be tested. Several other gas sands were cored higher.

About 3000 feet northeast of the discovery well at Sandy Point, J. T. Driscoll made location for J. W. Gullett 1 in the Lavco Navagation No. 3 Survey, Abstract 328, 264 feet from the west line and 362 feet from the south line of block 466 on an 8.8-acre tract, Brazoria County.

### Katy Extension Setting Casing

Stanolind Oil & Gas Company's W. M. Hargrove 1, about ¾-mile southeast of the discovery well at Katy field, T. S. Reese Survey, Section 110, Waller County, was running seven-inch casing after running an electrical logging device to 7500 feet. Several gas sands have been cored in Hargrove 1 from 6600 to 7500 feet. Just where the casing is to be set was not known at the close of the week.

Southeast of Bellville, R. L. Hopkins & J. T. McGregor et al's J. W. Reineche 1, J. Stephenson Survey, was abandoned at 5008 feet in shale. Several sands were cored from 3900 to 4093 feet but they failed to show anything.

A new wildcat location was announced for the Needville prospect, Ft. Bend County, by Marlen Oil Company. Frank Jurea 1 is 476 feet each way out of the north corner of the southwest half of a 131.14-acre tract in the H. & T. C. Survey, Section 26, abstract 756, Ft. Bend County.

### Clinton Extension Preparing to Test

Stanolind Oil & Gas Company's Oates 1, 4000 feet south of the discovery well, C. Martinez Survey, Harris County, was running screen and liner to test sands around 8099 feet. Screen lodged in the hole around 7950 feet. A production test should be made on the well the coming week. Oates 1 has had considerable trouble with gas for the past two months. Several times it attempted to blow out. The hole was plugged back from 8735 feet to 8099 feet.

At the new Bammel field, Harris County, Lawrence & Spear made location for Zapp 1, 900 varas north and 580 varas southwest of the east corner of the J. Farwell Survey. It is approximately 3800 feet southeast of the discovery well.

About 3000 feet southwest of production at Fairbanks field, Harris County, Stanolind Oil & Gas Company's W. S. Jacobs 1, W. C. R. R. Survey, Section 2, Block 1, showed salt water on a production test. Jacobs 1 was drilled to 7276

feet and plugged back to 6835 feet where seven-inch casing was set. The extension well flowed 19 barrels of oil in two hours and then went to salt water. The company will probably squeeze cement into the salt water sand. Jacobs 1 topped a gas sand at 6803½ feet and had oil sand from 6826 to 6826 feet 8 inches.

Jefferson County was probably the most active county in the Texas Gulf Coast during the past week with eight completions at Amelia field, the Cheek wildcat showing gas, and a Labelle wildcat preparing to be tested.

Northwest of production at Amelia, Peyton Brothers' Pansey Yount 1, A. Houston Survey, was abandoned at 7018 feet after running an electrical logging device. The well failed to show anything of commercial value on the logging device.

Normandie Oil Company is the first company to complete a well in the south portion of the Amelia field. Peveto 1, C. Williams Survey, made 676 barrels daily through a quarter-inch choke, with a tubing pressure of 1040 pounds and a casing pressure of 1000 pounds from Frio sands at 6777 to 6780 feet. The company has made location for Peveto 2 in the C. Williams Survey. Humble Oil & Refining Company accounted for the remaining six completions at Amelia.

Southwest of Amelia and in the Cheek area, Jefferson County, Magnolia Petroleum Company's Phelan 1, S. Stivers Survey, was drilling in shale at 8545 feet at the close of the week.. A gas sand was logged in Phelan 1 from 8455 to 8464 feet.

South of the discovery well at Labelle field, Jefferson County, Sun Oil Company drilled cement to 8497 feet after 9⅝-inch casing had been at 8598 feet. The operators will probably make a production test on this well next week. Sand showing gas was logged from 8319 to 8324 feet.

Humble Oil & Refining Company's Kirby Lumber Company 3-B, over a mile southeast of production at Segno field, M. Victor Survey, Polk County, was preparing to make a drill stem test at the end of the week of two feet of sand which had a good showing of oil. The sand was logged from 5340 to 5342 feet.

## TEXAS GULF COAST
### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| AMELIA— | | |
| Humble, Crook 2 | 606 | 6778 |
| Guinn 7 | 648 | 6778 |
| Halton-Ephlin-Morgan 1 | * | 7281 |
| Industrial Inv. Co., 3 | 680 | 6779 |
| Langham 3 | 518 | 6787 |
| Wholfert 1 | 660 | 6780 |
| Payton Bros., Pansey Yount 1 | * | 7018 |
| Normandie Oil Co., Peveto 1 | 676 | 6780 |
| BRENHAM— | | |
| Virginia Oil Co., Konioezny 1 | * | 2145 |
| HASTINGS— | | |
| Stanolind, Ford B-11 | 576 | 6080 |
| McKibben 2 | 648 | 6080 |
| LIVINGSTON— | | |
| Owenby Dr. Co., Pratt 9 | 386 | 4227 |
| MANVEL— | | |
| O. P. Burton, Arnold 1 | * | 4099 |
| Texas Co., Lemmer 4 | 334 | 4120 |
| NOME— | | |
| Shell, Paggi 7 | ¶1 | 6050 |
| PICKETT RIDGE— | | |
| Texas Co., Wittig 1 | 60 | 4598 |
| RACCOON BEND— | | |
| Humble, Austin College 12-X | * | 4283 |
| SOUTH COTTON LAKE— | | |
| Salt Dome, Lawrence 2-C | * | 1110 |
| SOUTH HOUSTON— | | |
| Stanolind, Drilling District 8, No. 2 | 386 | 4775 |
| Drilling District 9, No. 2 | 388 | 4736 |
| Drilling District 21, No. 2 | 384 | 4775 |
| Drilling District 22, No. 2 | 505 | 4775 |
| C. P. Williams 2 | 104 | 4068 |
| SOUTH LIBERTY— | | |
| Ganar Oil Co., Harrison 8 | 85 | 2975 |
| TOMBALL— | | |
| Geo. H. Echols, Wood 1 | * | 5607 |
| Humble, V. Faris 6 | 552 | 5551 |
| Hoffman 5 | ¶1¼ | 5593 |
| Johlke 2 | 468 | 5597 |
| Koury Dr. Co., Hillegist 2 | 624 | 5554 |
| VAN VLECK— | | |
| Skelly, Moore 2 | 711 | 7495 |
| AUSTIN COUNTY— | | |
| R. L. Hopkins & J. T. McGregor et al, Reineche 1, se of Bellville, J. Stephenson sur | * | 5008 |
| FT. BEND COUNTY— | | |
| Earl Trone et al, Trone 1, Long Point, H&TC sur 67 | * | 916 |
| WHARTON COUNTY— | | |
| Sam G. Harrison, Harfast 1, n of Louise, L. Conkrite sur | * | 5018 |

*Failures; †Junked; ¶Million cu. ft. gas.

### *Rules for malodorant use to be drafted May 31*

**Austin.**—The Texas Railroad Commission has called a hearing for May 31 at Austin to consider rules for effecting the provisions of House Bill 1017. The new law required that a distinguishable odor be placed in gas sold for domestic consumption.

The law was passed by the legislature as a result of the disaster in the New London school house in the East Texas oil field when more than 400 children lost their lives. An investigation disclosed that the explosion there was caused by gas leaks which might have been detected had some malodorant been placed in the gas so that it could have been detected readily.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As the pressure increases, CHEVRON automatically packs *tighter;* power is no longer wasted through leakage at increased pressures. And CHEVRON lasts so much longer than ordinary packing that you save time and money by repacking less frequently.

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# SOUTH LOUISIANA

***World's deepest producer again on production.***

* * *

***Gulf Coast's deepest hole blows out at 12,261 feet.***

* * *

***Union Sulphur finds commercial oil at Big Lake.***

**Lake Charles.**—Humble Oil & Refining Company has evidently been successful in shutting off the salt water in the deepest producing well in the world.

Ellender 1, Houma Gas field, Section 23-19s-19e, Terrebonne Parish, at the end of the week was making 35 barrels of fluid per hour through ¼-inch choke, showing 8 percent wash water, no salt water, with a tubing pressure of 2750 pounds and a casing pressure of 3100 pounds.

Production is from Miocene sand from 11,610 to 11,620 feet.

Humble Oil & Refining Company's Ellender 1 came in May 20 flowing 45 barrels of fluid per hour, 37 percent washwater, through a ⅜-inch choke with a tubing pressure of 775 pounds and no pressure reported on the casing. Seven-inch casing had been perforated with nine holes from 11,610 to 11,620 feet in Miocene formation. Ellender 1 was killed the first part of last week because of salt water encroachment. When the well was killed pressures of from 4000 to 5000 pounds were put on the pumps. Heavy mud was pumped into the well. After it was killed the perforations were squeezed with cement and a retainer set at 11,524 feet. Sand body in Ellender 1 was from 11,618 to 11,641 feet.

### Horseshoe Bayou Wildcat Blows Out

The Texas Company's Horseshoe Bayou 1, St. Mary Parish, which blew out last week at 12,261 feet and burned, will be reworked and carried deeper. A drilling barge will be floated into the location and the hole will be cleaned out and drilled deeper.

While coming out of the hole with 1350 feet of stuck drill pipe, the well started heading gas and caught fire, burned for one hour then went out. Only loss was the derrick floor and it is understood that the hole is in good condition down to 12,261 feet.

The Texas Company's Horseshoe Bayou 1 did establish a new deep drilling record for the Gulf Coast when it passed the 12,216-foot mark set by Continental Oil Company's Hebert 1 at Abbeville in Vermilion Parish. Horseshoe Bayou 1 is the second deepest well in the world, the deepest being a West Texas wildcat which went to 12,786 feet.

### Cameron Parish Wildcat Produces

The first commercial oil was discovered at Big Lake field, Cameron Parish, May 18, when Union Sulphur Company's J. O. Hebert 1, Section 18-12s-8w, came in flowing between 600 and 800 barrels of 38 gravity pipe line oil daily through a quarter-inch choke, with a tubing pressure of 1250 pounds from sands showing oil at 8326 to 8334 feet. Seven-inch casing was set at 8336 feet, bottom of the hole.

Union Sulphur Company's J. O. Hebert 1 was spudded January 29, 1937, and 12½-inch casing was set at 1351 feet. Sand showing oil was cored from 6436 to 6441 feet and from 6527 to 6537 feet. Another showing was reported from 6988 to 7004 feet.

Big Lake field was discovered by Magnolia Petroleum Corporation's Broussard 1, Section 13-9s-8w, when it made gas and distillate at 7966 feet. The operators have Willow Lake prospect and Big Lake field in two blocks of about 10,000 acres. Union Sulphur Company leased considerable acreage in the Big Lake area from Magnolia Petroleum Company. Standard Oil & Gas Company has around 1500 acres near Magnolia Petroleum Company's discovery well.

Vinton, Calcasieu Parish, was extended one mile west last week when Woodley Petroleum Company completed Matilda Gray 1, Section 32-10s-12w, at 3521 feet flowing 12 barrels of 35 gravity pipe line oil per hour through a ¼-inch choke with tubing pressure of 350 pounds and a casing pressure of 550 poundsg. Production is from sands at 3510 to 3521 feet. It was drilled to 3748 feet in shale and 7-inch casing was cemented at 3600 feet.

### Fenton Wildcat Has Gas Odors

Louisiana Crusader Oil Company's Langley 1, Fenton prospect, Section 36-7s-5w, Jefferson Davis Parish, was coring ahead in shale below 7618 feet after encountering a sand with an odor of gas from 7496 to 7505 feet. During the past week the crew made a drill stem test from 7359 to 7364 feet, but the tool slipped and the test was not successful. With a 2200-foot water cushion in the drill stem the operators received a fair blow in eight minutes. The well showed no pressures, but the operators recovered eight joints of mud. The drill stem test was made through quarter-inch choke.

Shell Petroleum Corporation and Union Sulphur Company have made location for a well approximately ¾ mile northwest of Shell Petroleum Corporation's Sturdevant 1, discovery well at South Roanoke field. Stroke 1 is 330 feet north and west of SEc SW SW Section 23-10s-4w, Jefferson Davis Parish.

### To Test Sand at 9357 Feet

The Texas Company was preparing to test a shallow sand at Lafitte field, Jefferson Parish, last week in Rigolets 7, Section 29-17s-24e, southeast of production. Rigolets 7 cored a sand showing oil from 9329 to 9357 feet. The hole was drilled to 9368 feet. Regular producing sands at Lafitte are found from 9450 to 10,200 feet.

Another good producer was completed at Caillou Island, Terrebonne Parish, by The Texas Company. State Caillou Island 3, Section 19-23s-20e, made 513 barrels of 37.1 gravity pipe line oil daily through a 5/16-inch choke, with a tubing pressure of 1860 pounds from sands at 6620 to 6648 feet. Casing was perforated with 139 shots. This 6648-foot sand lies between the 6100 and the 6800-foot sands at Caillou Island.

At Bay St. Elaine, Terrebonne Parish, E. J. LeBlanc made location for C. Wurzlow 1, in Section 17-22s-18e.

Shell Petroleum Corporation announced a new location for Gibson field (Bayou Cocotriz) last week when Realty Operators B-2 was staked 1320 feet north of the south line and 475 feet east of the west line, or 880 feet north of the discovery well in Section 18-17s-15e, Terrebonne Parish.

### Valentine Gets Another Producer

Another producer was completed at Valentine field, Lafourche Parish, by Pan American Production Company. The company's Harange 4, Section 8-17s-20e, made 624 barrels daily through a 3/16-inch choke, with a tubing pressure of 785 pounds and a casing pressure of 820 pounds from Miocene sands at 5422 feet. Casing was perforated with 16 shots from 5407 to 5422 feet.

Pan American Production Company was cutting and pulling screen on South Coast Corporation 1, southeast of production, Charenton field. It discovered a new producing sand some time ago. The operators will cement tubing at 7923 feet and make another attempt to

shut off salt water. During the past week when a test was made the well showed 15 percent salt water.

Another drill stem test was made on The Texas Company's St. Martin Land Company 9, Henderson salt dome, Section 21-8s-7e, St. Martin Parish, at 7970 feet. After making a drill stem test at 8195 feet which showed salt water the hole was plugged back to 8000 feet. Casing was perforated with 56 holes from 7945 to 7970 feet, and a 40-minute test was made. When the quarter-inch chokes were opened the crew recovered 10 stands of mud and 45 stands of salt water. At the end of the week the well was shut down waiting on orders.

Continental Oil Company's P. W. Miller 4, Section 28-7s-2w, east side of Tepetate, Acadia Parish, was completed for 300 barrels of 33 gravity pipe line oil daily through a 5/32-inch choke, with a tubing pressure of 1100 pounds and a casing pressure of 1350 pounds from 8316 feet.

Continental Oil Company is preparing to make another location for a well at Abbeville field, Vermilion Parish. The company drilled a 12,216-foot well in the area some time ago. It was plugged back and completed around 7500 feet.

### *50 Louisiana permits*

**Shreveport.**—Fifty drilling permits were authorized last week by the minerals division, Louisiana Conservation Commission. Thirty-six were in North Louisiana divided among the following parishes: Bienville, one; Bossier, two; Caddo, seven, including three in Rodessa; Claiborne, 10, all in Lisbon; Grant, one; Morehouse, one; Ouachita, six; Red River, one; Sabine, one; and Union, six.

The 14 in south Louisiana were divided among the following parishes: Acadia, two; Calcasieu, two; Cameron, four; East Feliciana, one; Iberia, one; Plaquemines, one; St. Mary, two; Terrebonne, one.

## SOUTH LOUISIANA

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| BIG LAKE— | | |
| Union Sulphur, J. O. Hebert 1.... | 700 | 8336 |
| CAILLOU ISLAND— | | |
| Texas Co., State Terrebonne Bay 3 | 513 | 6648 |
| CAMERON MEADOWS— | | |
| Burton Sutton Oil Co., School Land 18 ..... | 450 | 3650 |
| EAST HACKBERRY— | | |
| Texas Co., State B-21 ..... | 650 | 7631 |
| JEANERETTE— | | |
| Herton Oil Co., Banta 8 ..... | 870 | 6655 |
| Carter 6 ..... | 770 | 7041 |
| TEPETATE— | | |
| Continental, P. W. Miller 4 .... | 285 | 8316 |
| VALENTINE— | | |
| Pan American, Harange 4, dr to 7190 ft, pb and perf 5407-22 ft.. | 624 | 7190 |
| WEST HACKBERRY— | | |
| Burton Sutton Oil Co., F. M. Duhon 1-A ..... | 482 | 4879 |
| CALCASIEU PARISH— | | |
| D. & D. Oil Co., Lutcher Moore 1, nw of Starks 1-8s-13w ..... | * | 8557 |

*Failures; †Junked; ¶Million cu. ft. gas.

## NORTH LOUISIANA

***Deeper search holding interest at Rodessa.***

* * *

***Sugar Creek completions are disappointing.***

**Shreveport.** — With new operations and completions dropping steadily week by week in the Rodessa field, chief interest in that area aside from three extension sectors, northeast, southwest and north, is mainly centered in deeper exploration.

R. W. Norton's W. E. Payne 1, SE SE 27-23n-16w, Caddo Parish, south of the Rodessa Fault, proposed 10,000-foot test, last week was drilling below 9655 feet after two unsuccessful tests were made at 9642 feet. Why the tests were made is not known generally as the test is drilling "tight." After missing one test, the well was washed for 17 hours and then rocked it with gas but without result.

Arkansas-Louisiana Gas Company's Laura McIntosh 1, William Edmonson Survey, Marion County, Texas, gave up the search for deeper producing possibilities at 6925 feet and was plugged back to 5980 feet, where casing will be perforated and another test made. It was dry in the Rodessa horizons.

United Gas Public Service Company's J. W. Land 1, Robert Potter Survey, Cass County deep test, is drilling below 7255 feet. In Marion County, Arkansas-Louisiana Gas Company's C. C. Braden 1, Thomas Hanson Survey, after logging anhydrite stringer at 5181 feet, was drilling below 5246 feet. On top of this marker the sub-sea depth was 4971 feet.

The Hunter Company's E. W. Fonda 1, A. de los Santos Coy Survey, after flowing consistently for exactly one week, ceased to flow Thursday after-


Louisiana
and East Texas

. . . have many good supply companies. One, in particular, has been a favorite with oil men in this area since the first producing well was drilled in North Louisiana. Its business grows every year, indicating satisfied customers and favorable word-of-mouth advertising. All of which is intended to be a not too strident toot on the bazooka called PELCO.

PELICAN
WELL TOOL & SUPPLY COMPANY

SHREVEPORT, LOUISIANA

PELCO

Lake Charles—Houma—Converse
New Iberia—Rodessa—Monroe—Cotton
Valley—Greggton—Houston

noon. The well had gauged 283 barrels in 24 hours on the first full day's gauge flowing through ½-inch tubing choke at 6096 feet in the Gloyd horizon. A 19-hour gauge had been completed by the Texas Railroad Commission during which the well made 248 barrels through ½-inch tubing choke. The Hunter Company has made location for E. W. Fonda 2 in the same survey, located 632 feet northwest of E. W. Fonda 1.

Interest in the northeast end of the field centered in Drillers, Incorporated's (S. P. Borden et al) Glassell-Means 1, SW NE SE 9-23n-15w, which was coring in what was identified as the Young horizon at 6015 feet. This test is a direct north offset to Lion Oil Refining Company's recently completed Holm 1, NW SE SE 9-23n-15w, which caused a revision of views as to location of the fault in that part of the field.

In the north offshoot of the Caddo Parish part of the field two new locations were made: J. Edward Jones' Louisiana Real Estate Company 1, W½ SW 4-23n-16w, and Surf Oil Company's L. O. Allison 1, NE NE 8-23n-16w. The latter company is rigging for Sheets 1, SE NE 8-23n-16w.

### *Three producers added at Lisbon*

**Shreveport.**—The Lisbon field, producing oil from basal Glen Rose lime, added 3 oil wells last week to boost its total to 21 producers and had 2 others testing that have an important bearing in indicating the trend of production in the field.

A northwest edge test, J. B. Bond's H. E. Patton 1, NW NW 36-21n-5w, is testing at 5265 feet. This test logged 4 feet of saturated lime and then hit dense lime, indicating that it may be an edge producer.

One location southeast of production, on the other hand, Lyons & Neely's Bennett 1, NW NW 6-20n-4w, logged 17 feet of saturation from 5323 to 5340 feet, and set casing at 5311 feet.

Engineers of the Louisiana Conservation Commission last week began taking bottom-hole pressure gauges on "key" wells in Lisbon as a basis for the allowable for June which will be based 25 percent on bottom hole pressure and 75 percent on acreage. The average bottom-hole pressure is not expected to be above 1800 pounds. There has been but little gas at Lisbon, in fact too little to be re-assuring. Most of the Lisbon wells have been treated with acid before completion and for a few hours after being opened flow as high as 60 barrels per hour and then settle down to 400 to 800 barrels daily. However, none of the wells so far has shown any salt water with the oil.

There are 26 active operations in the field. Six new locations were announced last week, 4 being outside tests.

## NORTH LOUISIANA Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| CADDO PARISH (Rodessa)— | | |
| United Gas, Bremer Unit 9, 22-23n-16w | 192 | 6014 |
| CADDO PARISH (Pine Island)— | | |
| G. R. C. Oil Co., Herndon 5, 22-21n-15w | 55 | 1600 |
| Stanolind, Dillon Heirs 121, 14-21n-15w | 75 | 1680 |
| CLAIBORNE PARISH (Lisbon)— | | |
| DeArmand & McMillan, M. Patton B-1, 31-21n-4w | 416 | 5292 |
| Oden & Evans, Patton Est. 2, 36-21n-5w | 834 | 5352 |
| Ray P. Oden, H. W. Patton 1, 36-21n-5w | 600 | 5280 |
| CLAIBORNE PARISH (Athens)— | | |
| Standard, R. D. Baker 1, 27-19n-7w | * | 7248 |
| DE SOTO PARISH— | | |
| Benedum & Trees, Clifton 1, 33-13n-12w | * | 5669 |

*Failures; †Junked; ¶Million cu. ft. gas.

### *Rodessa output*

**Shreveport.**—Total cumulative production of the Rodessa field to May 1 was 34,522,339 barrels, 26,538,076 barrels on the Louisiana side and 7,984,263 barrels on the Texas side.

Daily average production for the week of May 15 was 91,274 barrels of which 49,337 barrels was on the Louisiana side. The daily average on May 15 was 141 barrels per well for the 646 producers in the field, the 373 wells on the Louisiana side averaging 132 barrels each and the 273 wells on the Texas side averaging 154 barrels each.

Total of natural gasoline produced at Rodessa for the week was 1,524,179 gallons.

### *Rodessa pressure continues to decline*

**Shreveport.** — Bottom-hole pressure on the Louisiana side of the Rodessa field in the Dees and Young horizons, the deepest oil producing strata, declined 23 pounds for the 30-day period ending May 1, as revealed by 80 key wells in which pressures were taken by the engineers of the Rodessa Operators Committee. The average decline for the month was .77 of a pound and made the average bottom hole pressure for the field on May 1, 1799 pounds.

The numerical bottom hole pressure as revealed by six key wells in the Gloyd horizon for the 30 days of April was 2360 pounds.

### *Sugar Creek wells are disappointing*

**Shreveport.**—Both oil wells completed in the Travis Peak horizon of the Glen Rose gas-distillate field at Sugar Creek, Claiborne Parish, by United Gas Public Service Company and associates have proved disappointing in volume. Last week the latest of the two, Dobbins 1, NE NE 12-19n-6w, gauged 184 barrels in 24 hours through ½-inch tubing choke with 1250 pounds casing pressure and 1200 pounds tubing pressure and an estimated gas-oil ratio of 8000 to 1. The same operators Warren Brown 1, Section 1-19n-6w, the earlier oil well in the Travis Peak, made 35 barrels in 24 hours through 3-16-inch choke with casing pressure 600 pounds and tubing pressure 1000 pounds.

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**Shreveport.**—A Glen Rose test on the southeast flank of the Sabine Uplift will be drilled by Seaboard Oil Corporation and H. L. Hunt, on a large block the two companies have in that area. They are rigging up for Good Pine Oil Company 1, Center SE SE 30-14n-5w.

### *Plan Lincoln Parish wildcat to 6000 feet*

**Shreveport.**—Location for a 6000-foot test on a 12,000-acre block was announced last week by H. D. Easton of Shreveport and Belmont Quadrangle Drilling Company of Bradford, Pennsylvania, for G. W. Dye 1, center NE NE 5-19n-4w, Lincoln Parish, North Simsboro district.

Drilling contract was awarded to Tippett Drilling Company of Shreveport who started moving in materials. Location is 8 miles southeast of Lisbon, and 14 miles east of the Sugar Creek field, Claiborne Parish, and about the same distance north of the Simsboro gas-distillate field. It is 3300 feet northeast of Homa-Okla Oil Company's Lewis 1, SW NE 5-19n-4w, drilled to 3001 feet and completed June 4, 1920. It is the first test drilled since that time in this township and range. The shallow test logged an oil showing at base of the Claiborne and top of the Wilcox at 1203-1211 feet.

Sam Merrill and associates of Houston, Texas, are planning an early 5000- to 6000-foot test on a 5000-acre block centering around Section 24-2n-9w, Vernon Parish, south of the Sabine Uplift. Geological work is being done by W. R. Julian of Shreveport.

T. Semmes Walmsley and associates of New Orleans have assembled a block of approximately 10,000 acres centering in Township 10 north, Range 8 west, for a contemplated 6000-foot test to be started by June 15.

### *No outlet*

**Shreveport.**—A field with four gas-distillate producers all shut in because it has no pipeline outlet.

That in brief is the Sibley gas field, Webster Parish, discovered in 1936 in the Glen Rose by J. P. Evans in township 17 north, range 9 west. Since then three other gas-distillate wells have been completed in the field.

DeSoto Oil & Gas Company's (R. O. Roy) recently completed gas-distillate Glen Rose test in the Lake Bisteneau district, Bienville Parish, also has no outlet. This company is drilling a second test and last week made location for William Ashley 2, center NE SW 15-16n-10w.

## ARKANSAS FIELDS

### *Plan deepest Arkansas hole in Miller County*

**El Dorado, Ark.**—Five miles south of the Garland City field, Miller County, Standard Oil Company of Louisiana made location last week on a geophysical prospect for a 9000-foot test. The location is Harvey 1, center SW SW 33-16s-26w.

The test is planned for 9000 feet and

if it reaches that level will be the deepest test ever drilled in Arkansas. Gulf Refining Company's deep test in Section 5-16-16, Union County, Smackover field, that holds the depth record for Arkansas, was abandoned just short of 8000 feet.

Marine Oil Company's M. Justiss 1, SWc Lot 7, NW 18-18-17, Union County, north offset to Lion Oil Refining Company's Edna Morgan 1, recently completed at 5559 feet to open Schuler as a new oil field, last week was having electrical tester run preparatory to setting final casing; total depth is 5660 feet, 101 feet deeper than the discovery well. The new test logged two oil showings at the producing level. In a core from 5589 to 5598 feet, the last three feet was saturated and from 5598 to 5610.5 feet, the last 7½ feet was saturated, with the top 5 feet being broken shale.

In the same section, Lion Oil Refining Company's Edna Morgan B-1 was coring below 5139 feet and Alice Sidney Oil Company's Morgan 1 was drilling below 3982 feet.

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**El Dorado, Ark.**—Leasing and trading in the vicinity of the newly opened Schuler district, Union County, Arkansas, continue active and this has stimulated additional wildcat leasing and geophysical prospecting in South Arkansas.

Two new blocks were assembled last week in South Arkansas. J. T. Walker of Shreveport has assembled 6000 acres in Township 19, Range 21, Columbia County, and J. D. Reynolds and W. S. King have taken a block of over 5500 acres centering around Section 34-11-17, Ouachita County, for a proposed 3000-foot test to start by June 26.

Frank Bryant has taken some of the leases held by L. A. Longino in Township 17, Ranges 19, 20 and 21, Columbia County and in the same county in Townships 17 and 18, Ranges 20 and 21, L. H. Simpson of Mexia, Texas, has been leasing. In eastern Columbia County and extending into LaFayette County, Standard Oil Company of Louisiana has been leasing mainly around Section 18-16-22. Atlantic Oil Producing Company has been shooting recently in Townships 16 and 17, Ranges 19 and 20, Columbia County.

J. C. Kelly, J. C. Voyles and R. O. Harmon are planning another immediate test on a block in Dallas County, on which they have drilled two shallow tests, the block being around Section 35-10-16.

## ARKANSAS
## Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| LA FAYETTE COUNTY— | | |
| King Drlg. Co., Walcott 1, 21-12-28 | * | 6218 |
| MILLER COUNTY— | | |
| Nivla Oil Corp., Merchants & Planters Bank 1, 18-15-26 | * | 4500 |
| NEVADA COUNTY— | | |
| Clyde H. Cox, William Haynie 1, 5-14-20 | 100 | 1197 |
| OUACHITA COUNTY— | | |
| O. F. Whittaker, S. Howard 1, 20-12-16 | * | 2716 |
| UNION COUNTY (Rainbow City)— | | |
| Penn-Ark. Pet. Co., W. N. Raulston 1, 12-17-14 | 15 | 2983 |
| UNION COUNTY (Urbana)— | | |
| McCreslenn Oil Co., Atkins 5, 3-18-13 | * | 3667 |

*Failures; †Junked; ¶Million cu. ft. gas.

## SOUTHEASTERN STATES

### *Mississippi plans Coastal leasing*

**Jackson, Miss.**—The Mississippi State Mineral Leasing Commission is expected to decide by May 28 whether it will accept the proposal of the Federal Royalty Company of Houston, Texas, which is seeking geophysical exploration rights on Mississippi Sound, that borders Hancock, Harrison and Jackson Counties, in South Mississippi. The sound, it is claimed, is Mississippi property and would not be affected by a federal bill which would reserve all continental United Coast lines as a mineral reserve.

Tip Ray, trustee, of Canton, Mississippi, has assembled approximately 25,000 acres of land in Township 8 north, Ranges 1 and 2 west, Madison County, on a 10-year basis for a proposed 5000-foot test, which may be started by July 1. The acreage may be shot before location is made.

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**Oklahoma City.**—The Oklahoma City Geological Society, at its Monday luncheon held at the Black Hotel May 17, heard Burton Delleney, engineer with Schlumberger Oil Well Survey Company explain the Dale photo-electric process for determining the source of water in oil wells.

**He's right! If pump repair men had to depend on jobs from slush pump owners using the SHEAR-RELIEF Valve their repair business would be rotten. Field records will show that. Damaged slush pumps are just about a thing of the past under SHEAR-RELIEF Valve protection. Pump over-pressures, so hazardous to slush pumps and parts, rotary hose connections, etc., are relieved by the shearing of the nail when pressure reaches the set point. The extent of the damage is the sheared nail. And that goes for boiler feed and other pumps for lower pressure service . . . for the SHEAR-RELIEF Valve is made in both high and low pressure types.**

FLUID-ACTION SLUSH PUMPS
ABERCROMBIE PUMP CO.
GULF BLDG. HOUSTON TEX.

SHEAR-RELIEF VALVE

# DO YOU REMEMBER

## *The Leak in The Dike?*

**That story of your grammar school days, of the boy who saved the country by holding his fist in the hole in the dike? . . . A story which suggests that many seemingly trivial things are of the utmost importance.**

**A parallel for the oil producer lies in the case of valve cups. Unpretentious though they are, no item of pumping equipment warrants more careful consideration. Wise and careful selection means less down time, less cut oil, fewer rod jobs—reduced lifting costs.**

**Because of their fine quality, excellent workmanship and adaptability, O'Bannon cups are daily gaining favor.**

**It is not unusual for a producer to report an experience like that of W. H. Humphries, Supt., Winona Oil & Gas Company at Holdenville, Oklahoma. Mr. Humphries ran an O'Bannon DeLuxe Pump with 8 cup plunger and O'BANNON VALVE CUPS Oct. 20, 1934, in a well 4200 feet deep, running 16 thirty-six inch strokes per minute (23,000 per day). This pump was first pulled Feb. 25, 1937, after a continuous run of 2 years and 4 months for ball and seat. The cups were still usable and could have been re-run.**

**Walter O'Bannon Co.**

Tulsa, Oklahoma

Your O'Bannon Catalog No. 8 carries a Valve Cup Chart which will help you to choose the proper cups for your pumps or barrels. Your supply store has an O'Bannon Catalog, and can supply you with

**O'BANNON VALVE CUPS**


# NEW MEXICO

***Completions make production cut improbable.***

* * *

***Monument well curbed to correct gas ratio.***

**Hobbs, N. M.** — Continued large volume of completions occurring each week in Lea County areas forestalls any possibility of the Oil Conservation Commission reducing the production allowable of New Mexico to the level recommended by the Bureau of Mines to keep in step with action taken last week by the Texas Railroad Commission. Bulk of New Mexico's production shares market outlet with West Texas fields. The former is currently producing 14,200 barrels above the level designated by the government bureau, and has boosted allowables 21,400 barrels daily since the first of the year. New completions in Lea County have absorbed the periodical production increases, except for 3000 barrels recently allotted to Artesia district to apply on an export contract. Lea County added 17 oil producers the past week, including 11 in the Monument area, and during the same period the county recorded 12 new operations.

Potential flow from Tide Water Associated Oil Company's State 1-J, C SW NW 17-19s-37e, northernmost test for the Monument field that has been in process of completion for several weeks, has been curbed in order to attain a balanced gas-oil ratio. The well originally flowed 60 barrels of oil per hour through open tubing at 4034 feet, or 318 feet sub-sea, with 4,000,000 feet of gas daily. Tubing packer was landed at 3980 feet after experimenting at several upper levels, and lowered the gas volume to 1,250,000 feet daily, and the oil flow to 21 barrels per hour. Rig has been moved one location north. This company has also started operations on State 1-K, C NE SW 13-20s-37e. Gulf Oil Corporation's J. W. Smith 2, C NE NE 34-19s-36e, west edge producer, responded to treatment with 2000 gallons of acid at 3975 feet, or 318 feet below sea level, flowing 193 barrels of oil through open tubing in 6 hours. No failures have been drilled on the north, west or south flanks of the Monument field.

Ohio Oil Company's State-Hansen 1, C W½ NW NE 16-20s-37e, developed an unusually good flow for the extreme east side of the Monument field, by gauging 120 barrels of oil in 45 minutes through 1-inch choke after using 3000 gallons of acid at 3850 feet, with an elevation of 3549 feet. The well later flowed 15 barrels per hour on 12/64-inch choke. Amerada Petroleum Corporation added three flowing producers the past week, including State 2-Z, C SE NE 13-20s-36e, which flowed 420 barrels of oil through 1-inch choke in 15 hours after using acid at 3867 feet. Gulf Oil Corporation's State - Orcutt 2-D, C SW NE 13-20s-36e, flowed 258 barrels initial through varied size chokes after using acid twice at 3878 feet.

### North End Wells Weak

Tide Water Associated Oil Company's Marshall 1, C SW NE 13-21s-36e, located ¾-mile east of nearest oil production in the Eunice lime area, is slated to be abandoned after yielding only 300,000 feet of sulphur gas after plugging back from water at 4005 feet to 3865 feet. Nitro shot was used below the casing, and the pipe was gun-perforated at 3588-3615 feet. Tests in process of completion on the north end of the field are having difficulty in making commercial wells, although the area is conceded to be eventually linked with the Monument area. Phillips Petroleum Company's State-Mex 1, C NE NE 30-20s-37e, flowed 84 barrels of cut oil in 18 hours after using 7000 gallons of acid at 3843 feet, or 310 feet sub-sea. The same company's State-Quapaw 1, north offset, swabs 24 barrels daily, including 50 percent drilling fluid, after deepening to 3864 feet, or 334 feet below sea level. It was treated with 14,000 gallons of acid and given nitro shot at 3840 feet. Atlantic Refining Company's State 1-O, C SW NW 32-20s-37e, flowed 360 barrels initial after using 3000 gallons of acid at 3845 feet, or 300 feet sub-sea.

Gulf Oil Corporation has authorized 3 new operations for the Eunice field, including State-Butler 1, C SW SE 19-20s-37e, offsetting the northernmost producer. Work is underway on W. W. White 5, C NE NE 25-20s-36e, and State-Bell 5-F, C SW SW 36-20s-36e. Texas Pacific Coal & Oil Company is starting operations on State 4-A, lease 2, C SW SW 9-22s-36e, north offset to Oil Well Drilling Company et al's State-Shell 1-A, which is flowing 9[illegible] barrels oil and 2,500,000 feet of gas daily after nitro shot at 3804 feet, or 221 feet sub-sea.

### Per-Well Output Cut

Prorated wells in Lea County were subjected to a minor cut in production allowable effective May 16 in order to accommodate new completions during

the previous period while the allowable for the state remained at 114,000 barrels daily. Wells prorated on a flat basis were assigned an allowable of 89 barrels daily for the remainder of the month, involving a 3-barrel cut. The new schedule prepared by C. G. Staley, umpire, gives the Monument field first position for the state, with an allowable of 33,072 barrels from 379 wells, including 14 wells that can not produce their earned quota. The Eunice field has been leading for a long period, having displaced the Hobbs field from top rank.

Resumption of development of the North Lynch field, Lea County sandy-lime area, is to be undertaken by The Texas Company. Rig has been moved in to drill J. S. Lea 2, C SE NE 15-20s-34e, a west offset to the company's discovery well, which is making 40 barrels of 37 gravity oil daily at a plugged-back depth of 3622 feet. Magnolia Petroleum Company's State 1-G, NW NW NE 24-17s-34e, second producer for the Vacuum area, swabbed 189 barrels of oil in 24 hours early last week. Production was increased after nitro shot in upper pay at 4459-4480 feet. This semi-wildcat has been in process of completion since last February, and was plugged back from 4905 feet to 4793 feet. Magnolia Petroleum Company's Hanna 1, C SE NE 7-26s-38e, wildcat in southeastern Lea County, was drilling at 1900 feet, having changed to cable tools at 1385 feet.

Lower lime zone is to be explored by The Texas Company et al's Ellen Weir 1, C NE NE 14-20s-37e, wildcat in the sandy-lime belt off the east flank of the Monument field, after being inactive at 4074 feet since last November. The prospect was originally owned jointly by C. & G. Oil Company and The Texas Company, but the former withdrew when unsuccessful efforts were made to exclude the water that appeared with small volume of oil from lime zone, which is believed to be equivalent to the Hobbs pay. Continental Oil Company et al's J. M. Skaggs 1, C NE SE 24-20s-37e, 1¾ miles southeast of the Weir test, was completed last March as a flowing producer after using acid twice in sandy-lime at 3791-3900 feet. Continental Oil Company et al's Burger 1, east offset to the latter, was drilling at 3000 feet. Harry W. Leonard et al's Siddall 1, C SW SW 6-20s-38e, northernmost test for the sandy-lime belt, was drilling at 3895 feet. Stanolind has moved in materials to drill Turner 1, C NW NW 20-20s-38e.

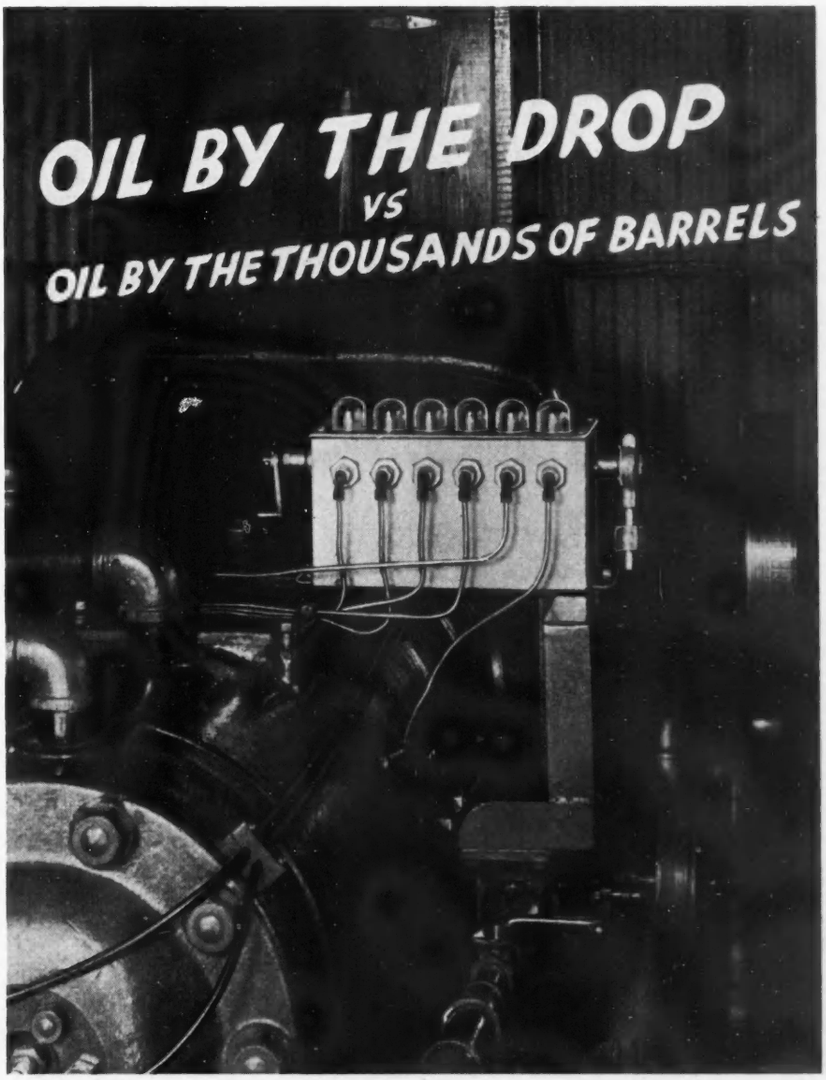
Linking of the Penrose area with the north extension became assured the past week when Humble Oil & Refining Company's J. L. Greenwood 1, C SE SE 9-22s-37e, gauged 5 barrels of oil per hour after 265-quart nitro shot at 3668-3768 feet. It has an elevation of 3427 feet. The well made 25 barrels daily prior to shot. Stanolind Oil & Gas Company's Eve Owens 1, C SW NW 3-22s-37e, listed last week as an east extension for the Penrose area, gauged 12 barrels per hour for 24 hours through ¾-inch choke after using 2000 gallons and 4000 gallons of acid at 3725 feet, or 299 feet sub-sea. J. E. Farrell, Inc.'s Walden 2-B, C NE SW 15-22s-37e, blew out at 3461 feet, and was rated at 40,000,000 feet of dry gas daily. Contractor was preparing to mud off gas and resume drilling.

## NEW MEXICO

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| LEA COUNTY (Eunice Field)— | | |
| Stanolind, O. J. Gilluly 3-B, c se sw 33-20s-37e | 150 | 3825 |
| Two States Oil Co.-Southern Pet. Explo., Inc., McQuatters 3, c sw ne 11-21s-36e | 1500 | 3865 |
| LEA COUNTY (Hardy Field)— | | |
| Ajax Drl. Corp.-The Texas Co. et al, J. P. Alexander 1, lot 14, 5-21s-37e | 40 | 3755 |
| LEA COUNTY (Penrose Field)— | | |
| N. G. Penrose, Rowan-Nichols Oil Co., Cary-Humble 3, c se nw 22-22s-37e | 200 | 3680 |
| Skelly, J. V. Baker 4, c sw nw 27-22s-37e | 300 | 3610 |
| LEA COUNTY (Langlie Field)— | | |
| Harry W. Leonard et al, B. T. Lanehart 3, c ne nw 21-25s-37e | 274 | 3091 |
| LEA COUNTY (Monument Field)— | | |
| Amerada, W. P. Byrd 2-A, c se sw 12-20s-36e | 1500 | 3875 |
| State 1-Y, c ne se 17-20s-37e | 4000 | 3835 |
| State 2-Z, c se ne 13-20s-36e | 1500 | 3867 |
| Gulf, T. Anderson 8, c sw ne 17-20s-37e | 3000 | 3868 |
| J. W. Smith 2, c ne ne 34-19s-36e | 800 | 3975 |
| State-Orcutt 2-D, c sw ne 13-20s-36e | 500 | 3878 |
| Humble, State 4-F, c sw sw 17-20s-37e | 1200 | 3855 |
| Ohio, State Hansen 1, c w½ nw ne 16-20s-37e | 2400 | 3850 |
| Repollo, J. R. Phillips 4-A, nw nw sw 31-19s-37e | 600 | 3915 |
| Tide Water Associated, Laughlin 2, c ne sw 4-20s-37e | 2000 | 3895 |
| State 1-J, c sw nw 17-19s-37e | 1500 | 4034 |

*Failures; †Junked; ¶Million cu. ft. gas.


**The "STANDARD" 6-Feeder pictured above is furnishing dependable lubrication, automatically, by the drop . . . according to the setting . . . to this engine which is furnishing the power to pump a group of wells from a central power station. Thus is oil by the drop protecting costly machinery which is producing oil by the thousands of barrels. For full details on "STANDARD" Lubricators, address American Lubricator Co., Dallas, Texas.**

**"STANDARD" LUBRICATORS**

# ROCKY MOUNTAIN FIELDS

***Lance Creek mystery well shows possibilities.***

* * *

***Montana consolidation plans building pipe line.***

**Casper, Wyo.**—Information on Ohio Oil Company's "mystery" well Leo 5, OPC-16, NW NW SW 35-36n-65w, in the Lance Creek field, Niobrara County, was released this week after being kept closely guarded since the hole passed the top of the red beds at 4297 feet. It had promising oil shows in the lower horizons and is preparing to run 7-inch production casing to 5560 feet for a production test of the Tensleep. Location east of the main producing limits of Lance Creek, and if a producing well, will establish a considerable wider extent for the Tensleep levels of the field.

Additional developments in the eastern area of the Lance Creek field were foreseen this week with the announcement of Continental Oil Company of intentions to drill its block this summer. Location has been announced for CSW NE NE 29-36n-64w, on the Leach lease, 5 miles east of the present outpost producer. The new deep test well is to be spudded before the middle of June.

Continental Oil Company's Otto Rohlff 8, SE SW SE 31-36n-65w, is digging cellar. Tom Bell 10, CSW NW 34-36n-65w, is drilling at 3379 feet while Schurucht 4-B, NWC SW SE 6-35n-65w, has set 15⅜-inch casing at 265 feet.

Ohio Oil Company's Richards & Comstock 2, NE SW 32-36n-65w, formerly a black-oil producer from the upper Sundance level of Lance Creek, being deepened to the Basal Sundance horizon for light oil production, has reached its objective and is waiting on 4¾-inch to set at 3683 feet on top of formation. Hole bottoms at 3783 feet, 5 feet in the red beds.

Argo Oil Company is starting Ford 4, SW SE 33-36n-65w. It is a south offset to the company's Ford 3, SW NW 33-36n-65w, which is at present preparing to test production in the Basal Sundance sand which was logged at 3956-4046 feet. Hole bottoms below the sand at 4052 feet. Ford 3 originally completed with hole bottomed in the Basal Sundance formation at 3965 feet for 25 barrels on pump.

### New Comers in Tri-State Basin

Active testing will be underway soon on the holdings of the Universal Consolidated Oil Company and Italo Petroleum Corporation, newcomers to the Tri-State Basin area of northwestern Colorado, southwestern Wyoming, and northeastern Utah. The companies have acquired holdings in the Powder Wash area, main producing field in the region and are at present surveying the territory to establish location for a well to be drilled here this summer. Prior to the entry of the California concerns the area in the Powder Wash field was operated solely by the Mountain Fuel Supply Company.

Mountain Fuel Supply Company has one active drilling well in the Powder Wash field, which is located in Moffat County, northwestern Colorado, J. C. Donnell 1, NE SE 31-12n-97w, is drilling at 4400 feet. Union Pacific 3, SE NE 15-16n-104w, in the South Baxter Basin field, Sweetwater County, southwestern Wyoming, being drilled with cable tools, is making hole at 2100 feet.

### Laramie Basin at Peak

Developments in the Laramie Basin area of southern Wyoming were at a peak this week with 3 wells at near completion stages and other operations advancing rapidly. Two wells are at critical stages in the Medicine Bow field, Carbon County, operated jointly by Ohio Oil Company and California Company. Wm. Kyle 2, CSE SE 26-21n-79w, second well to be drilled on the discovery lease for the field, is testing production in the Sundance production levels. Seven-inch was set on top of the first Sundance sand at 5476 feet and the well made 150 barrels per hour from this horizon before cleaning out. Flow is accompanied by a gas rated at 20,000,000 cubic feet daily. Hole bottoms in the Second Sundance at 5668 feet in which formation excellent saturation was also cored. Union Pacific-Cronberg 4, CSW SW 25-21n-79w, in the Medicine Bow field, has set the 7-inch on top of the first Sundance at 5412 feet and is waiting on cement. This hole encountered water in the lower Sundance at 5544-5617 feet and plugged back to 5475 feet.

On the East Allen Lake field, Carbon County, Wyoming, Medicine Bow Oil Company's Hintze-Government 1, CNE SW 18-22n-79w, discovery well for the eastern extension of the Allen Lake gas field, which is being deepened to test the structure for oil production, showed for 5,000,000 cubic feet initial after underreaming hole below 6-inch casing at 2113 feet and deepening hole several feet below former bottom at 2180 feet. Hole will be deepened further into formation to explore the oil possibilities for the field. When originally completed in December of last year, well made 25,000,000 cubic feet of gas daily, which flow has now been cased off while hole is deepening.

Further activity was seen this week in central Wyoming where Stanolind Oil & Gas Company spudded Tensleep 1, CNW SE 26-30n-79w, deep test to the Tensleep formations underlying the Salt Creek field.

### Properties Consolidated

Closing of a deal was made this week whereby the Home Oil & Refining Company of Great Falls, Montana, acquired the producing properties of the Nadeau brothers and A. B. Cobb in the Cut Bank. This merger of the several companies will result in Home Oil & Refining Company becoming the largest independent unit firm in the northwest with its own production, transportation, refining and marketing facilities. Cobb and the Nadeau brothers will become members of the board of the company, with no other changes in personnel or policies.

Home Oil & Refining Company plans the construction of a 105-mile pipe line connecting the Cut Bank properties with the company's refinery at Great Falls. The line will also pass through the Pondera field in which the company has holdings and will take crude from that field to the plant. The refining plant at Great Falls has a daily capacity of around 1000 barrels and with the recently acquired properties' estimated reserves of some 5,000,000 barrels of oil the future of the refinery is said to be well established. The plant was recently remodeled and will be enlarged in the near future, it was announced. The purchase of the producing properties and the proposed building of the pipe line are backed by eastern capital.

## MOUNTAIN STATES
## Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| **MONTANA** | | |
| BIG HORN COUNTY (Hardin Field)— | | |
| Big Horn Oil & Gas Co., 30, e se nw 23-1s-33e | ¶ | 700 |
| Warren & Sons 1, 24-1s-33e | ¶ | 1127 |
| GLACIER COUNTY (Cut Bank Field)— | | |
| Montana Headlight Oil Co., Britton 4, sw ne 14-34n-6w | 140 | 2909 |
| C. E. Walgren, Britton 2, se ne 14-34n-6w | 25 | 2915 |
| Santa Rita Oil & Gas Co., Madison 1, cne se 30-34n-5w | * | 2912 |
| TOOLE COUNTY (Kevin Sunburst Field)— | | |
| Agen & Krause, Krause 1, se se se 9-35n-3w | 7 | 1821 |
| A. E. Crumley's Shaw 11-A, se nw ne 35-36n-2w | 75 | 1586 |
| Lamont Petroleum, Van Note 2, ne nw nw 30-35n-2w | 75 | 1512 |
| Wm. McKnight, Havland 2, cw ne sw 19-35n-2w | 25 | 1626 |
| Shaver Oil Co., Shaver 3, se ne 11-34n-2w | 25 | 1490 |
| **WYOMING** | | |
| ALBANY COUNTY (Quealy Dome Field)— | | |
| California Co., Wilson 3, sw nw sw 18-17n-76w | 400 | 4010 |
| CONVERSE COUNTY (West Shawnee Creek Structure)— | | |
| Wyoming Southern Oil Co., Salisbury 2, nw se 17-32n-69w | ¶7½ | 454 |
| SHERIDAN COUNTY (Beaver Creek Structure)— | | |
| Sheridan Syndicate, Allison 1-A, sw sw se 15-55n-85w | * | 3392 |

*Failures; †Junked; ¶Million cu. ft. gas.

# EASTERN FIELDS

***West Virginia completes its largest gas well.***

* * *

***Pennsylvania well rated at 300 barrels per day.***

**Pittsburgh, Pa.**—Gauging 18,000,000 cubic feet a day, Hays Oil & Gas Company's test on the E. C. Humphreys farm, Milliken anticline in Poca district, Kanawha County, made West Virginia gas history last week—the largest gas well to be completed in the state. Depth is 4804 feet and the location is about a mile west of the Ahaz Spencer farm on which the previous record gas well is located. About 30 wells are drilling in Poca and adjoining Elk districts, comprising the Oriskany field.

In the Central Ohio field, Ohio Fuel Gas Company brought in one of the largest gas wells in that area for some time on the David Cornell farm, Section 18, Butler Township, Knox County. Bottomed at 3075 feet, it gauged 4,120,000 feet the first 24 hours from Clinton sand at 3059-3072 feet.

### Expect Increased Activity

In adjoining Coshocton County, Preston Oil Company completed a large producer on the A. Vanwinkel tract, Section 14, Perry Township. The fourth on this lease, it was bottomed at 3185 feet and produced 147 barrels the first 24 hours from Clinton sand at 3134-83 feet after a shot. Encouraging showings of oil and gas in drilling Knox, Coshocton and Licking County tests are reported, and this area is expected to be the scene of increased activity during the coming months. Knox Exploration Company's test on the William Durbin farm, Section 4 of Union Township, Knox County, which had an initial production of 175 barrels a week ago, has settled to 80 barrels.

Highlighting Pennsylvania activity was Carnegie Natural Gas Company's test on the Albert Iams tract, South Franklin Township, Washington County, which, on the basis of a short production test, is estimated to be a 300-barrel well. It is the second test on this lease and found the Pittsburgh Coal sand at 683-689 feet; the Fourth sand at 2856-2885 feet; and the Fifth sand was topped at 2907 feet, with oil at 2911-2914 feet.

The Premium-Bolyard Oil Company brought in a 20-barrel producer on the James Beach farm in the Oatsville field of western Pike County, Indiana. Bottomed at 1200 feet, it was the only completion reported in Indiana. In Madison Township of the same county, Murphy Oil Company is moving a rig on the Roscoe Cox lease and has made two locations on the Essie Stewart lease. Texas operators are shooting in this area and it is expected that two or three deep wells will be started shortly.

Preparations are going forward for the first real oil test in Fayette County, Illinois, following more than a year of geological surveying and leasing activities. Ike W. Taylor Drilling Company, Houston, has unloaded a new rotary drill at St. Peter and will start a test on the W. H. Bahde farm, Lone Grove Township, one mile west of St. Peter. The tract is included in a block of leases totaling 4000 acres held by Albert Rush and E. H. Milligan.

## EASTERN FIELDS
## Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| **OHIO** | | |
| BELMONT COUNTY— | | |
| Home Utility Co., J. E. Grimes 8 | ¶ | 1212 |
| COSHOCTON COUNTY— | | |
| Preston Oil Co., A. Vanwinkle 4.. | 147 | 3185 |
| FAIRFIELD COUNTY— | | |
| City Natural Gas Works, Ella Tschopp 3 | ¶ | .... |
| GUERNSEY COUNTY— | | |
| Wilbur Keith & Co., Lafe Milligan 1 | ¶½ | 1215 |
| George Jewell & Co., Henry Armstrong 3 | ¶1/3 | 1169 |
| HURON COUNTY— | | |
| A. C. Leathers & Co., Fred Jarrett 1 | ¶½ | 348 |
| Charles Blott, Jr. 1 | ¶ | 350 |
| KNOX COUNTY— | | |
| Ohio Fuel Gas Co., David Cornell 1 | ¶4 | 3075 |
| LICKING COUNTY— | | |
| Emerald Petroleum Co., Jasper Martin 8 | 5 | 814 |
| Alexandria Banking Co. et al, Jane G. Hirst 6 | 4 | 740 |
| MEDINA COUNTY— | | |
| Ohio Fuel Gas Co., Maud Rogers 1 | ¶ | 3495 |
| Matilda Fleck 2 | ¶ | 3498 |
| MEIGS COUNTY— | | |
| Smith Oil Co., Geo. Renshaw 1 .. | ¶¼ | 925 |
| H. B. Nelson, Lemione Hysell .... | ¶ | 765 |
| Ohio Fuel Gas Co., H. B. Pickett 1 | * | 915 |
| Tierney & Co., Daniel Keyse 1... | * | .... |
| MONROE COUNTY— | | |
| Preston Oil Co., Ernest Mallet 2.. | ¶ | 1248 |
| Charles Hogue, W. S. Howell 1.. | * | 1999 |
| MORGAN COUNTY— | | |
| Cumberland Oil Co., Henry Hopkins 22 | 2 | 465 |
| NOBLE COUNTY— | | |
| George Robinson et al, Effie Bruce 2 | * | 764 |
| WASHINGTON COUNTY— | | |
| McTaggart & Co., J. T. Miller 2.. | ¶¼ | 1952 |
| WAYNE COUNTY— | | |
| William C. Marable, W. C. Marable 1 | * | 830 |
| **WEST VIRGINIA** | | |
| BOONE COUNTY— | | |
| Pond Fork Oil & Gas Co., Cole & Crane 27 | ¶ | 2424 |
| United Fuel Gas Co., Mohler Lumber Co., 4694 | ¶1/3 | 4211 |
| BRAXTON COUNTY— | | |
| Pittsburgh & West Virginia Gas Co., John Hall 1 | ¶ | 1620 |
| CABEL COUNTY— | | |
| Kentucky, West Virginia Gas Co., James McCallister 1 | ¶ | 3462 |
| GILMER COUNTY— | | |
| Pittsburgh & West Virginia Gas Co., S. A. Hayes 1 | 10 | 1332 |
| Oil City Trust Co., A. C. & T. C. McQuain 5 | * | 2600 |
| Carnegie Natural Gas Co., Lee Jarvis 1 | ¶2/3 | 1580 |
| Massey & Jarvis Drilling Co., Carl McGinnis 1 | ¶½ | 1245 |
| KANAWHA COUNTY— | | |
| Hays Oil & Gas Co., E. C. Humphreys 1 | ¶18 | 4804 |
| MARION COUNTY— | | |
| South Penn Oil Co., C. A. Pritchard 1 | ¶ | 2993 |
| MASON COUNTY— | | |
| New Haven Gas Co., C. M. Ohlinger 1 | 1 | 1840 |
| PLEASANTS COUNTY— | | |
| Lawrence McClure, Samuel G. Hammett 1 | 4 | 1725 |
| F. L. Gammage, Ed Wells 1 | ¶ | 1980 |
| C. L. Barron, J. H. Roberts 4.... | * | 750 |
| RITCHIE COUNTY— | | |
| Louis Swadley, J. H. McGinnis 1 | ¶½ | 2147 |
| ROANE COUNTY— | | |
| Reedy Oil & Gas Co., Maggie Miller 1 | 15 | 1880 |
| L. C. Young et al, J. N. Hawkins 1 | 1 | 1690 |
| TYLER COUNTY— | | |
| Thomas King et al, Otto Ash 1.. | ¶1/5 | 1107 |
| WETZEL COUNTY— | | |
| C. B. Lewis et al, James Gilbert 1 | ¶ | 2161 |
| **PENNSYLVANIA** | | |
| GREENE COUNTY— | | |
| Carnegie Natural Gas Co., Bowers 1 | ¶ | 3202 |
| Greensboro Gas Co., Barclay 1.... | ½ | 1016 |
| Equitable Gas Co., Dugan 1 ..... | * | 3203 |
| WASHINGTON COUNTY— | | |
| Carnegie Natural Gas Co., Alberta Iams 2 | 300 | 2915 |
| **INDIANA** | | |
| PIKE COUNTY— | | |
| Premium-Bolyard Oil Co., James Beach 1 | 20 | 1200 |
| **ILLINOIS** | | |
| CLARK COUNTY— | | |
| Joseph Hasset et al, Wm. Davidson 1, se ne sec. 11-9n-14w, Johnson Township | ¶ | 515 |
| Joseph Hasset, J. A. Turner 31, ne sw se sec. 33-11n-14w, Parker Township | 1 | 460 |
| CLAY COUNTY— | | |
| Pure Oil, Eugene Weiler 1, se sw se sec. 33-3n-8e, Clay Township... | 37 | 2613 |
| CLINTON COUNTY— | | |
| Carl Willi et al, Martin Holle 1, nec sw sec. 12-1n-2w, Lake Township. | * | 1361 |
| Santa Fe Oil & Gas Co., P. Kleinekorte 2, nw ne sec. 8-1n-3w, Santa Fe Township | 35 | 996 |
| CRAWFORD COUNTY— | | |
| Fred Burns, L. M. Highsmith 1, se sw sec. 12-5n-13w, Martin Township | 25 | 973 |
| EDWARDS COUNTY— | | |
| Leach Bros., Jos. Ellen 1, nw nw sec. 3-2s-10e, Albion Township... | * | 4932 |
| JASPER COUNTY— | | |
| Wm. Goodwin, M. M. Burton 1, se nw nw sec. 18-7n-14w, Hunt Township | * | 1104 |
| LAWRENCE COUNTY— | | |
| Warren Hastings et al, Stevens 1, nw se sec. 30-5n-10w, Russell Township | * | 660 |
| W. A. Lagow 1, ne se se sec. 30-5n-10w, Russell Township | * | 2012 |
| McDONOUGH COUNTY— | | |
| Chas. Measley, Geo. Roberts 3, se se nw sec. 21-4n-4w, Lamoine Township | * | 415 |
| Spence et al, Joseph Hoing 5, ne sw sw sec. 16-4n-4w, Lamoine Township | 10 | 437 |
| MARION COUNTY— | | |
| Adams Louisiana Oil Co., Glenn Merryman 3, ne sw sw sec. 21-4n-1e, Patoka Township | 80 | 1410 |
| PIKE COUNTY— | | |
| Super Oil Co., Fred Eagle 1, ne nw se sec. 24-5s-3w, Newburg Township | * | 750 |
| WAYNE COUNTY— | | |
| The Pure Oil Co., Geo. Bradley 1, sw sw nw sec. 26-1n-7e, Bedford Township | 100 | 2987 |

*Failures; †Junked; ¶Million cu. ft. gas.

## MICHIGAN FIELDS

### *Over production serious threat to market*

**Mt. Pleasant, Mich.**—Michigan's current over-supply of crude oil situation, precipitated largely because of the new Buckeye-Gladwin oil pool and an adverse market, threatened this week to go from bad to worse.

Already prorated under a voluntary program down to a 200-barrel base with pipe line demand regulating the overage, the Buckeye field is producing approximately 18,000 barrels against an estimated potential upwards of 50,000 barrels. James C. Graves of Saginaw, chairman of the Buckeye Committee and chairman of the Michigan Proration Committee which was disbanded a year ago when production fell far below markets to automatically eliminate the group's work, called operators together again this week.

Operators are unanimous that proration is vital to maintain the current field price level of 1.39½ cents per barrel. The two market outlets, Pure Transportation Company and Simrall Pipe Line Corporation, have indicated to the committee that "about 18,000 barrels a day is the most market in sight now for the field." A slash, which operators hope to stave off, in the price might open new markets.

#### 35 Ready to Complete

There were upwards of 35 tests ready to complete in the Dundee lime, producing formation of the pool, this week. Several companies have indicated they will not drill into the producing formation on other than required offsets until their producing leases decline to a point where new oil will have a market. Nevertheless, Prorate Umpire O. H. White, who was called back into the picture when Buckeye became a problem, had 29 wells on his schedule, all in proven territory, slated for completion within 10 days.

C. W. Teater's Dokomos 8, SE NW SW 11-18n-1w, on the northwest trend of the pool, initialed 3500 barrels against 150 pounds casing head pressure, to set a new record for the field this week. It was the only major completion inside the field.

#### Important Extension

What loomed as an important producing extension test this week was Caldwell & Prey's Flynn 1, SW SW NW 4-17n-1e, Billings Township, Gladwin County. Test logged Dundee lime at 3495 feet, showed oil and gas at 3569-80 feet and filled with 2000 feet of oil in four hours at 3603 feet. Treated with 1000 gallons of acid it produced 205 barrels on a 5-hour test.

Flynn 1 is 1 mile east of the old Oard discovery in Section 25-18n-1w, (Buckeye) and 1½ miles northwest of the McClanahan-Avery 1, Section 10, Billings Township.

Mammoth Producing & Refining Company continued to test Manyette 1, Section 3-18n-1w, northwest extension to the main north Buckeye pool, with commercial production estimated by swab and flow test upwards of 200 barrels daily.

## MICHIGAN

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| ALLEGAN COUNTY— | | |
| Lentz & Miller's Hardy 1, c n½ ne nw 21-4n-13w | 130 | 1560 |
| CLARE COUNTY— | | |
| John Mercier's Bicknell 2, c nw sw 6-17n-4w | ¶1½ | 1421 |
| GLADWIN COUNTY— | | |
| M. F. Whitehill's King 4, ne sw nw 2-17n-2w | 45 | 3889 |
| Voorhees Co.'s Esten 1, ne sw se 5-18n-1w | * | 3791 |
| Daily Crude Oil Co.'s Jackab 1, ne sw se 10-18n-1w | 255 | 3650 |
| C. W. Teater's Domokos 8, se sw nw 11-18n-1w | 3500 | 3661 |
| Mammoth Producing & Ref.'s Tubbs 1, nw nw sw 13-18n-1w | * | 3700 |
| E. S. Beaver's Havens 4, sw nw nw 36-18n-1w | 350 | 3604 |
| KENT COUNTY— | | |
| James Flanigan's Friedli 1, se se se 26-7n-9w | * | 2100 |
| MONROE COUNTY— | | |
| Mich. Pacific's Wohlgamuth 1, se ne nw 6-7s-6e | * | 2700 |
| MUSKEGON COUNTY— | | |
| West Michigan's Baker 1, c ne 6-9n-14w | ¶1½ | 1256 |
| SAGINAW COUNTY— | | |
| T. F. Caldwell's Birch Run Bank 1, ne nw se 10-10n-5e | * | 1760 |

*Failures; †Junked; ¶Million cu. ft. gas.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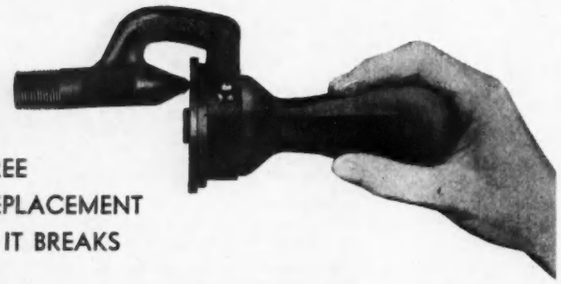

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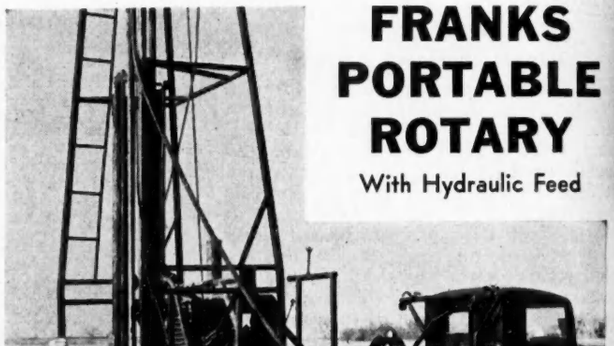

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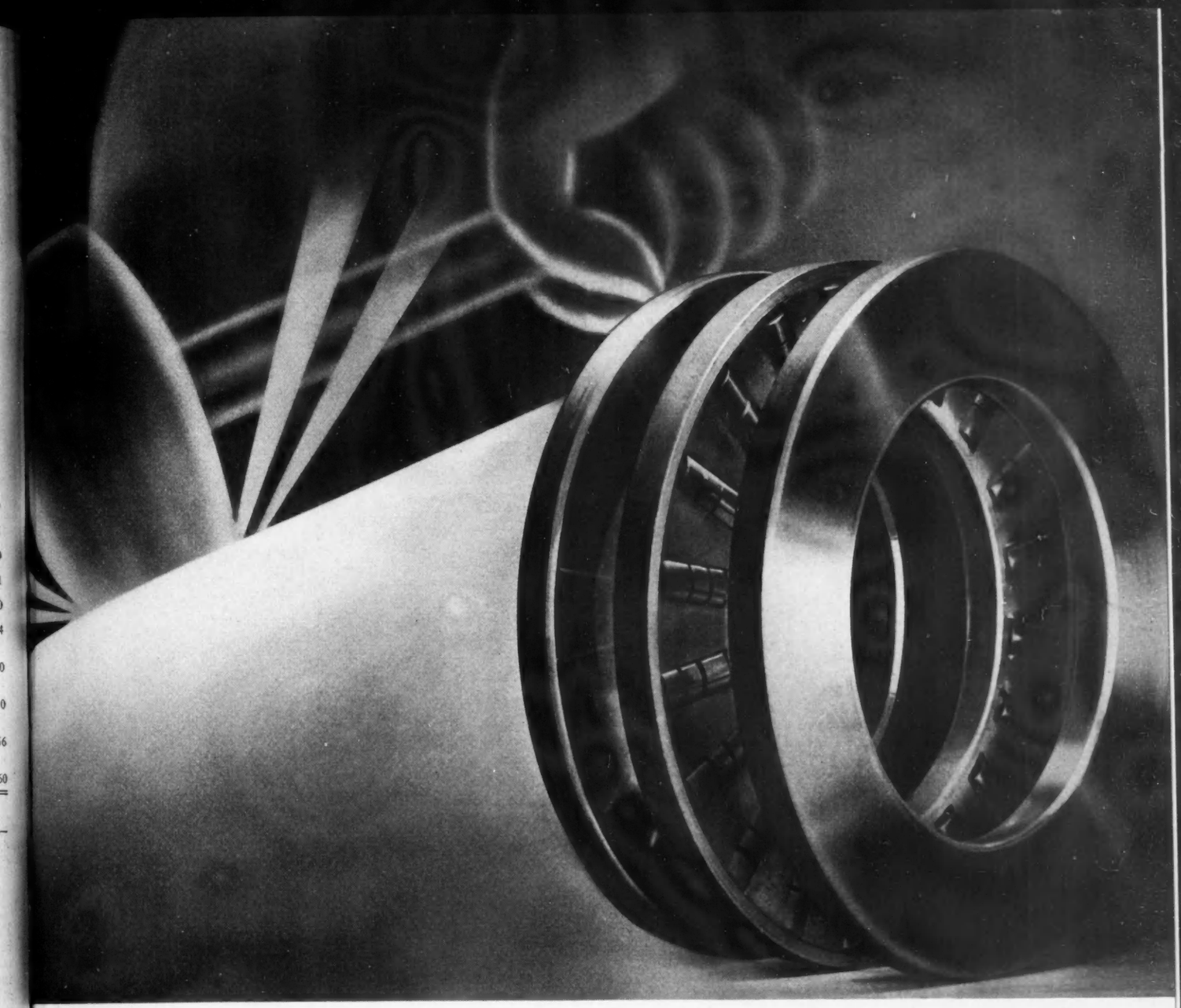

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# *Michigan Revived*

## BUCKEYE IS MOST IMPORTANT OF SEVERAL DISCOVERIES

By NORMAN X. LYON, Staff Writer

**Mt. Pleasant, Mich.**—Following a big drilling play which took on boom proportions in the spring and summer of 1935 in the Crystal-Ferris township district of Montcalm County, Michigan, for a period of more than a year steadily declined in importance in Eastern states crude oil production. Crystal field was the tenth major oil production area opened in Michigan following the original Saginaw short-lifed Berea sand production in 1925.

January, 1935, Michigan produced a million barrels of oil for the first time in a 30-day period. Production held at that level for 18 consecutive months, reaching a peak in October, 1935, with 1,700,000 barrels. Crystal production proved flashy, some wells initialing 8000 barrels daily, but it was short in life, and present production is less than 3000 barrels daily although upwards of 300 Dundee lime wells were drilled. Heavy water encroachment on the producing lime has resulted in abandonment of at least 50 percent of the wells.

### Crude Shortage in 1936

During 1936 operations centered chiefly on wildcatting, drilling up the Tri-Township (Mecosta and Montcalm counties) shallow sand gas field and flank drilling in old areas. Approximately 700 drilling permits were issued, a state record. However, it was not until the closing months of 1936 that the Michigan picture from a crude production standpoint saw improvement. Actual crude output had fallen to about 700,000 barrels per month by December, 1936. Several independent refineries were closed down—nearly all the 15 operating plants had reduced operations from 25 to 75 percent due to a crude scarcity. Two or more plants purchased some crude from the Mid-Continent to maintain operations. Prices of crude jumped to a peak of $1.42 per barrel. Premiums above this were offered without callers, as there was no crude to commit.

### Several Recent Discoveries

This was the none to happy picture faced by Michigan operators as 1936 drew to a close. In less than two months the picture was reversed. Chartiers Oil Company's Currie 1 opened production from Dundee lime in Vernon township, Isabella County; McClanahan Oil Company opened Clayton township, Arenac County; Pure Oil Company opened Sherman township, Isabella County, and J. V. Wicklund Development Company's State 1 opened Buckeye township, Gladwin County.

### Buckeye Appears Important

However, only one of these districts, Buckeye, at the present time following four months of development, appears of major importance. The others based on development to date will be comparatively small areas.

Since the Wicklund discovery was completed, January 6, 1937, with an initial production of 1257 barrels, approximately 65 commercial wells have been completed in the Dundee lime horizon in the area. Geographic limits of the pool (or pools) as yet have not been established. Approximately 1500 acres in Section 11-10-12-14-13-15-2-3 are proven in the so-called north pool. Three miles due south approximately 800 acres are proven. One mile east of the south pool, McClanahan Oil Company's Avery 1, SW NW NW 10-17n-1e, Billings township, following acid treatment is pumping from 15 to 30 barrels daily from the Dundee.

Geologists to date have had everything but a field day in charting the Buckeye pool. The Wicklund discovery was approximately 38 feet lower on the Dundee than the old Oard well three miles south in Section 25 of the same township. To date some of the best producers in the main pool are producing from 20 to 50 feet lower on structure than the discovery.

Wicklund's discovery, State 1, SW SW SE 11-18n-1w, logged Dundee lime at 3536 feet with a sea elevation of 748 feet and was completed at 3621 feet. Mammoth Producing & Refining Company's Jacob 1, SE NE SE 10-18n-1w, a half mile west and a quarter mile north, showed lime at 3542 feet (elevation 753 feet) and was completed at 3621 feet. Initial production was over 2000 barrels.

Sun Oil Company's Salla 1, SE NW SW 11, two locations due east of the Jacob logged Dundee lime at 3531 feet (elevation 751 feet) and completed at 3660 feet, but although higher on structure initialed only 580 barrels after acid. Fortney Oil Company's Miller 1, NE NE NE Section 15, half mile due west of the discovery logged Dundee at 3561 feet (elevation 750 feet), and initialed at 3641 feet 140 barrels after acid.

Cryden Oil Company's Shaffer 1, SW SE SW Section 12, just short of a mile east of the discovery, had Dundee at 3565 feet (elevation 743 feet), and although 34 feet lower than the discovery initialed 1200 barrels with acid.

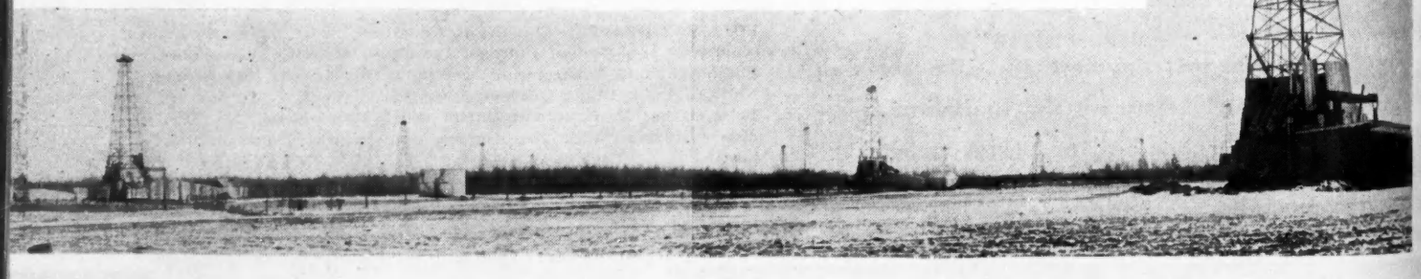
Commercial production has been established to date a mile east, half a mile south, one mile west and 1½ miles north of the discovery. A Dundee test in NE NE SW 23-18n-1w, about midway between the north and south pools has been established as at least a pumper. Another month will be required to clarify the south pool. Fifteen wells ranging up to 1500 barrels daily have been drilled to date.

Mud and bad road conditions during the spring months curtailed operations but despite this as high as 55 strings were active and in mid-May there were 80 strings and 40 other locations.

J. V. Wicklund Development, Mammoth Producing and Refining and the Beaver - Graves - Mechling - Kirkham group are the chief independent acreage holders and operators.

Sun Oil Company is the only active major in the Buckeye play, and if the field is extended northwest Sun will control virtually the entire acreage. Pure Oil Company, chief operating major in Michigan since 1927, has no holdings in the area as now developed.

The Buckeye field is only five miles east of the village of Gladwin, a former lumber town and for the past 40 years chiefly a typical Michigan farm community. It is served by one railroad, the Michigan Central, which runs to Bay City, which has a Great Lake shipping port. Good roads reach Gladwin, but field roads had to be built. Gladwin is only eight miles northeast



**View of Buckeye field in Michigan.**

†"WEAPONS OF THE WEAK" – by Charles M. Russell

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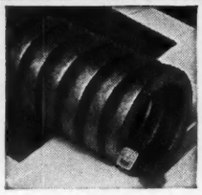

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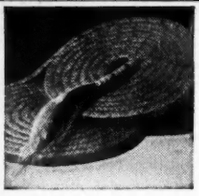

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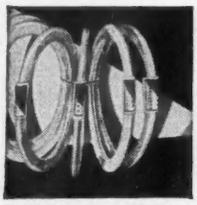

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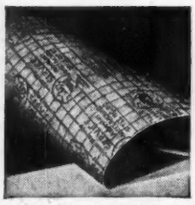

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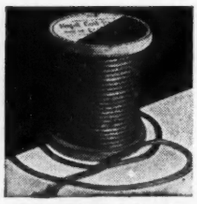

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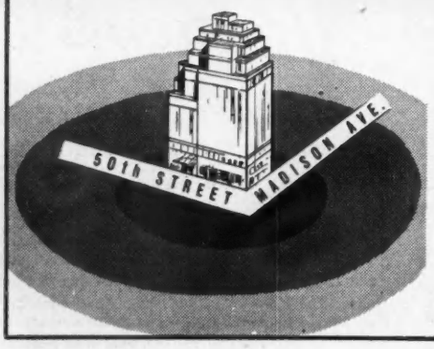


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of Beaverton, where the Pere Marquette Railroad has a terminal. West Branch is 30 miles north, and Mt. Pleasant 45 miles south.

All the major supply companies and most of the independents have or are putting in stores at Gladwin or at Winegars, two miles south of the field, a small railroad and highway M-30 crossing. This is the first time that supply stores have been located immediately with the opening of a new pool. Porter, Crystal, Greendale, Vernon and other pools were serviced out of Mt. Pleasant.

### Several Outlets

Buckeye is producing approximately 24,000 barrels of crude oil daily at the present time and has a rated potential of 50,000 barrels. Under a voluntary proration agreement between operators a 300-barrel per well base is being used with pipe line requirements determining the above base ratio.

Facilities for handling the entire Buckeye output are available, but present market requirements are behind the state's production. Pure Transportation Company has a 6-inch line from Buckeye to Beaverton and then south to its Greendale tank farm. The farm has an outlet to Bay City by pipeline where crude is shipped by lake tanker and railroad. The company's lines also tie into the Michigan-Toledo Pipe Line Company's 8-inch line from Mt. Pleasant to Toledo.

Simrall Pipe Line Corporation has a 6-inch line from Buckeye to Beaverton and then south to their Mt. Pleasant terminal, with intermittent railroad shipping points and a direct tie-in to the Michigan-Toledo 8-inch line, which is an affiliate with Simrall.

The two systems servicing the field are capable of handling around 60,000 barrels of oil. Restricted Michigan and out-of-state markets, however, have forced proration.

Buckeye crude has a heavy paraffin base and an average gravity of 36.8. Refineries with present processing methods have found it slightly less desirable than other Michigan crudes. The current price is $1.39½ cents per barrel or 2½ cents under the posted price for other central Michigan crudes.

Most operators are now running 2- or 3-inch tubing immediately after drilling into production to conserve gas. The gas-oil ratio is comparatively low in the field. Tubing also has been found helpful in miminizing trouble experienced in wells sludging up.

Cable tools have been used to complete 97 percent of all wells drilled to date. A few operators have used rotaries to drill the first 800 feet. Fourteen-inch is commonly used to start the hole completing in the lime with 5-3/16-inch.

The Dundee lime section in the Buckeye area is one of the thickest showing commercial productions found to date in the state. It ranges from 100 to 200 feet and ordinarily carries from two to four distinct pay zones. The pays on structure are ordinarily found at 50 to 70 feet, 80 to 90 feet and at 110 and 125 feet in lime. On the flank production pays are found somewhat higher in the lime. Virtually no salt water trouble has been experienced in the field so far.

A one to 10 acre spacing pattern is being carried out.

# CALIFORNIA FIELDS

***Kern County wildcats holding center of interest.***

* * *

***Ten Section well completed for 2700 barrels daily.***

* * *

***Wilmington continues most active field in state.***

**Los Angeles.**—Kern County still remains the center of wildcat activity. In the Wasco area, Seaboard Oil Corporation's Continental K.C.L. No. C-1 exploratory test in Section 26-27-24, is being cored in brown shale at 8697 feet, the top of the Miocene being encountered at 8000 feet. While the hole is a little deep, it is understood that it still has interesting possibilities.

The Carrizo Plains area will get a play with the Eocene Oil Company's staking of a location for a wildcat in Section 31-31-22, Kern County.

Since Standard Oil Company of California's efforts in the Greeley area of Kern County have been rewarded by the successful completion of K. C. L. 11-3 for 3375 barrels per day. The company has started two new operations. K. C. L. 11-4, south of 11-3, which has been standing rigged up, has been spudded. A new location has been staked for K. C. L. 11-6, in Section 17-29-26, approximately 1000 feet north of K. C. L. 11-3.

### Coring Below 12,000 Feet

In the Ten Section area, Superior Oil Company and Union Oil Company's deep exploratory test, K. C. L. No. 8, in Section 11-30-26, has passed the 12,000 foot mark and is coring ahead.

Shell Oil Company's No. A-23, in Section 30-30-26, also in the Ten Section area of Kern County, has been completed for an initial output of 2700 barrels per day of 31.7 gravity oil, cutting 9.0 percent. The well was choked back to 2400 barrels daily and the cut dropped to 0.7 percent. This hole was drilled to 8295 feet and plugged back to 8219 feet.

Eastmont Oil Company's discovery well, Olcese 1, in the East Round Mountain area of Kern County, Section 16-28-29, is now pumping 350 barrels a day, of 16.7 gravity oil, with a 3.0 percent cut. The derrick being erected for the second well is north of the new producer.

### Discovery Sands Up

Barnsdall Oil Company's Rancho San Francisco 1, Section 26-4-17, Newhall area Los Angeles County, which came in several weeks ago for a new discovery has sanded up. The liner was jerked by the operator and the hole squibbed with nitroglycerin. On an open hole swabbing test it sanded up again. An attempt was made to run the liner. It froze, and efforts are now being made to recover the liner. Depth is 6472 feet.

Catalana Corporation's wildcat test, Montana Lands 1, in Section 11-4-12, Los Angeles County, was drilled to 6382 feet in gray sand and abandoned.

In Fresno County, Western Gulf Oil Company's S. P. L. 3 in Section 3-17-15, Cantua Creek area, was cemented at 6505 feet to shut off bottom water. It swabbed on production test but sanded up. A 4¾-inch liner has been run inside the 7-inch casing, and another swabbing test is being made.

At El Segundo, Ohio Oil Company's Gough 3, which recently blew out, could not be cleaned out and has been abandoned. The location has been shifted and another well will be drilled.

Union Oil Company's El Segundo 2 came in for 342 barrels, of 28.6 gravity oil, at a total depth of 7636 feet.

At Moro Bay, San Luis Obispo County, Gretna Corporation's Miano 1, wildcat in Section 25-30-10, with bottom at 991 feet, set a tester at 910 feet for a test of oil and tar sand showings. Owing to the fractured nature of the formation tested, the results were not conclusive and the operator is preparing to core ahead.

Amerada Petroleum Corporation's Marks No. 1, an outpost gas test in Section 24-4-2, Rio Vista gas area of Solano County, which cored the top of the gas sand zone at 4140 feet, was drilled to 4388 feet. The 7-inch casing was cemented at 4135 feet and the well is now standing. It is interesting to note that this well, being an outrider, picked up the sand at a comparatively high point. Amerada Petroleum Company has in the foundation for Marks 2 in the same Section.

### Moving Out of Rio Vista

Coast Exploration Company is moving from the Rio Vista area, San Joaquin County, to the Modesta area in Stanislaus County, and has a rig up for a gas test located in Section 30-4-19.

Hancock and Bush Oil Company is coring ahead in Bradley 1, a wildcat in Section 26-10-34, of the Adams area of Santa Barbara County. The hole is now drilled to 4770 feet in the Monterey shale. The top of the zone was encountered 4103 feet.

Wilmington continues to be the most active field in California, with 10 completions and 19 new locations hung on the board during the last week. At this writing there are better than 50 strings

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of tools running and the recent cut in price has not, as yet, slowed down drilling operations. The outstanding well in the area was MacMillan Petroleum Company's Hayes 1, which came in for 700 barrels a day from 3595 feet. Its present production is 900 barrels per day on a 40/64-inch bean of 18.0 gravity oil.

**Deep Tests**

The joint test being drilled by Superior Oil Company and Union Oil Company, midway between Ten Section and Fruitvale fields in Kern County, Kern County Land Company 8, Section 11-30-26, as of May 17 was drilling and coring at 12,228 feet in shell. This hole has a 7-inch string landed at 10,380 feet, and is making fair time considering its depth.

Another hole, evidently out after a deep record, is Kettleman North Dome Association's No. 4-18J. It was drilling in hard sand at about 10,100 feet at last reports. Last casing was 9⅝-inch, cemented at 8387 feet. Union Oil Company's Bell 100, deep test in the old Santa Fe Springs field, with bottom at 10,789 feet, is still milling on lost drill pipe, top of which is at 7513 feet.

In the Lerdo area of Kern County, Arkelo Petroleum Company's No. 41, Section 23-28-26, with bottom at 10,056 feet, is still fishing for stuck drill pipe. Union Oil Company is having trouble in cementing off water in Callender 50, deep test for the old Dominguez field. Bottom is at 10,435 feet, and it has been necessary to recement 6⅝-inch casing for the third time at 10,050 feet.


Solves YOUR BRAKE BLOCK problems

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—Bands already lined with Grizzly Blocks . . . ready to put on your rotary rig.

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—Both bands and blocks factory drilled exactly to manufacturer's specifications.

**You Get Rid of . .**

—Uncertainty as to getting the right lining for the job, the right size lining for the band, the correct drilling.

—The bother and interference of relining bands . . . all that is necessary is to install the new bands.

—Worn, warped trouble making bands . . . Under the Grizzly Band Exchange Plan such bands are turned in and junked.

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Under this convenient new plan you get bands delivered to you that are correctly curved to proper drum diameter; that insure perfect lining contact to the drum. It will pay you big dividends . . . in faster drilling, greater safety, and more ton miles of brake block service, while getting the benefit of the superior performance of Grizzly Full-Moulded Rotary Blocks. Leading supply houses stock Grizzly-Lined new steel bands for all types of rotary draw works . . . ask your supply man for complete details and prices.

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## *Olson bill permits Huntington Beach tideland drilling*

**Los Angeles.**—The governor of California has signed the Olson bill which provides for drilling tidelands at Huntington Beach.

The new law provides for submission of bids to drill eleven parcels of tidelands, located roughly two miles west of the pier at Huntington beach, and for a royalty of 30 percent on wells making more than 200 barrels a day. No minimum is set for smaller wells. It is further provided that wells must be drilled from piers, groins or islands.

In the event no satisfactory bids are received, it is provided the state director of finance may again call for bids, or proceed to have the drilling done by the state, either by contract or day labor.

The governor issued a statement saying he signed the bill in keeping with a policy he announced some time ago. "While questions of its constitutionality and its elasticity were called to my attention, and while there probably are provisions in the measure that make it difficult of administration, this bill embodies virtually all the provisions and safeguards which I have advocated to enable the people of California to protect their publicly owned oil deposits in the Huntington Beach area." The law only applies to the Huntington Beach area.

## CALIFORNIA

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth. |
|---|---|---|
| EL SEGUNDO— | | |
| Union, El Segundo 1 | 595 | 7636 |
| Ohio Oil Co., A. S. Gough 3 | * | 7100 |
| HERMOSA BEACH— | | |
| Leora Oil Co., No. 1 | 50 | 5465 |
| HUNTINGTON BEACH— | | |
| Union, Copeland 10 | 120 | 4254 |
| WEST COYOTE— | | |
| Standard, Emery 63 | 270 | 4173 |
| WILMINGTON— | | |
| Bankline Oil Co., Chuck 1 | 280 | 3442 |
| Geo. F. Getty, No. W-9 | 350 | 3352 |
| MacMillan Pet. Corp., Hayes 1 | 900 | 3595 |
| Olympic Ref. Co., Fee 1 | 140 | 3505 |
| Pacific Western Oil Co., Patten 2 | 400 | 3556 |
| Premier Pet. Corp., Selegna 3 | 200 | 3500 |
| Royalty Service Corp., Community 5 | 440 | 3610 |
| Sunrise Oil Co., No. 1 | 150 | 3553 |
| Union Pacific, Offset 18 | 795 | 3476 |
| Union Pacific Ry. Co., Offset 17 | 760 | 3523 |
| LOS ANGELES COUNTY— | | |
| Caltana Corp., Caltana 1 | * | 6234 |
| Shell, McKinley 4-1 | * | 7744 |
| BELRIDGE— | | |
| Belridge Oil Co., No. 2762 | 390 | 8587 |
| FRUITVALE— | | |
| Meridian Oil Co., Turner 3 | 275 | 3109 |
| Harry H. Magee, Pasquini 1 | 210 | 3154 |
| KERN FRONT— | | |
| Tide Water Associated, No. 7 | 100 | 2787 |
| MOUNT POSO— | | |
| Shell, Vedder 32 | 475 | 1689 |
| MIDWAY-SUNSET— | | |
| Honolulu Oil Corp., No. 54 | 500 | 3530 |
| Shell, McKeon, fee 2 | 400 | 2117 |
| TEN SECTION— | | |
| Shell, K. C. L. 23 | 2700 | 8219 |
| ROUND MOUNTAIN— | | |
| Honolulu Oil Corp., No. 33 | 340 | 2037 |
| GATO RIDGE— | | |
| Barnsdall, Tognazzini 8 | 1200 | 2625 |
| RINCON— | | |
| C. C. M. Oil Co., Hobson A5 | 275 | 5227 |
| SESPE CANYON— | | |
| Merchants Pet. Co., No. 7 | 400 | 980 |
| KERN FRONT— | | |
| Republic Pet. Co., Strassburger 15 | 235 | 2001 |
| KERN COUNTY— | | |
| Pageman & Hennes, Pagehen 1 | * | 1150 |
| I. J. Banducci, Ticehurst 2 | * | 3392 |

*Failures; †Junked; ¶Million cu. ft. gas.

# IMPORTANT WILDCAT TESTS

## CALIFORNIA

### FRESNO COUNTY

CANTUA CREEK—Western Gulf's S.P.L. 3, 3-17-15, td 8531 ft, plug 6950 ft, recemented through perforations 6330 to 6340 ft, bailing sand, water and some oil.

DEVIL'S DEN—Amerada Pet. Corp.'s Beer 4, 17-26-19, spudded May 9, dr. Den Pet. Co.'s Bates 1, dr sandy shale 4186 ft. Geo. Goodrum's Baron 1, 24-25-18, td 320 ft, rep equip. Lube Oil Co.'s Gordon 1, 2-25-18, sd 4280 ft.

LERDO—Arkelo Pet. Co.'s No. 41, 23-28-26, td 10,056 ft, fsh dr pipe.

PREMIER—Bojaki Oil Co.'s Bowen 1, 28-27-27, sd 1959 ft.

GRAPEVINE—Buffalo Oil Co.'s Tejon 1, 5-10-19, sd 4452 ft. Ohio Oil Co.'s Title Ins. D1, 21-11-19, dr shale 8430 ft K.C.L. E2, 6-30-26, dr sandy shale 1300 ft. Reserve Oil & Gas Co.'s No. 2-6, 2-10-19, dr shale 2638 ft. Ritchie 33-1, 33-11-19, td 6030 ft, plug 4990 ft, sd; Tejon 33-2, 33-11-19, td 4505 ft, plug 4474 ft, sd; Tejon 33-3, td 4431 ft, shut in; Tejon 33-4, dr shale 2500 ft.

BENA—Cajalco Pet. Co.'s Brown-Pallette 1, 9-30-30, dr gray sand 804 ft.

KERN FRONT—C.C.M. Oil Co.'s Carter 1, 7-27-27, spud May 12, dr. Seskayden Oil Co.'s No. 3-A, 17-28-27, td 2890 ft, bailing.

WASCO—Continental Oil Co.'s K.C.L. A-1, 8-27-24, td 9591 ft, killed and sd. Seaboard Oil Corp's K.C.L. C-1, 26-27-24, dr shale 8710 ft, top of Miocene 8000 ft.

ROSEDALE—Continental Oil Co.'s K.C.L. B-1, 12-29-26, dr hard sandy shale 7980 ft.

JASMINE—Doyle Pet. Corp.'s Quinn 1, 15-25-27, td 2956 ft, plug 2882 ft, sd; No. 2, td 2922 ft, sd.

EDISON—East Edison Oil Co.'s No. 1, 23-30-30, dr granite 1140 ft.

ELK HILLS—Elk Hills Pet. Co.'s No. 1, 14-31-28, sd 7580 ft.

CARRIZO PLAINS—Eocene Oil Co.'s No. 1, 31-31-22, lcn.

ARVIN—General Pet. Corp.'s Arvin 1, 26-31-29, td 7462 ft, plug 7215 ft, pumping water, trace oil.

NORTH KERN RIVER—Hub Oil Co.'s No. 1, 8-28-28, sd 3125 ft.

ROUND MOUNTAIN—Pageman & Hennes' Pagehen 1, 10-28-29, td 1150 ft in granite, abn.

TEN SECTION—Shell's Canal 21-14, 14-30-25, dr shale 7754 ft. Superior—Union Oil Co.'s K.C.L. 8, 11-30-26, dr shale 12,015 ft.

SOUTH MARIPOSA — Trans-Line Pet. Corp.'s No. 1, 3-10-23, sd 662 ft.

SAN EMIDIO—Union's No. C3, 33-11-22, dr shale 2190 ft.

RIO BRAVO—Union's Kernco 1-34, 34-28-25, dr shale and sand 7770 ft, top Miocene 7700 ft.

MIDWAY-SUNSET—Valley Oil Co.'s No. 1, 18-32-23, sd 2815 ft.

BAKERSFIELD—Wilshire Oil Co.'s F. & P. 1, 36-29-27, spud May 10, dr.

### MISCELLANEOUS

HUMBOLDT COUNTY — Bushnell Oil Corp.'s Daisy Cook 1, 28-1-2, no report. Texas Co.'s Eureka 2, 22-3-1 td 7697 ft, ran 900 ft blank liner to 7395 ft, to cement top and bottom, to lower shut off.

KINGS COUNTY—Birch-Royer Oil Co.'s Orr 1, 5-23-17, rur. Central Calif. Utilities' Kettleman-Lakeview 3, 11-23-19, td 1207 ft, plug 1190 ft, sd. Dudley Ridge Dev. Co.'s No. 2, 24-22-19, td 4787 ft, wocs 6⅝ in at 3400 ft. Glen C. Stone's Teeter 1, 25-20-20, td 1040 ft, co. Tri-Counties Oil Co.'s Olson 1, 10-23-22, td 4160 ft in sand, to run casing.

SAN BENITO COUNTY—Tide Water Associated's Murphy Ranch 1, 5-12-4, td 6921 ft, plug 5990 ft, perforated 5970 to 5975 ft and 5870 to 5880 ft, flowed water, trace of oil, sd.

SAN JOAQUIN COUNTY—Standard's McDonald Farms 3, 24-2-4, td 5339 ft, plug 5299 ft, shut in; Woods 1, 24-1-5, lcn.

STANISLAUS COUNTY — Coast Explor. Co.'s No. 1, 30-4-9, bldg rig.

SOLANO COUNTY—Amerada Pet. Corp.'s Drouin 2, 25-4-2, td 4463 ft, shut in; Emigh 2, 26-4-2, td 4505 ft, shut in; Marks 1, 24-4-2, td 4388 ft, topped sand 4135 ft, wocs 7 in. at 4135 ft. Amerada Pet. Corp.'s Marks 2, 22-4-2, foundation.

#### ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

| | |
|---|---|
| *—*dry hole abandoned well.* | owdd—*old well drilling deeper.* |
| ‡—*salt water (completions).* | owpb—*old well plugging back.* |
| †—*junked and abandoned.* | pb—*plugged back or plugging back.* |
| ¶—*million feet of gas.* | r—*reaming.* |
| abd—*abandoned.* | rog—*rig on the ground.* |
| bbls—*barrels.* | rur—*rigging up rotary tools.* |
| br—*building rig.* | rust—*rigging up standard tools.* |
| b.s.—*basic sediment.* | sd—*shut down.* |
| csg—*casing.* | sdtr—*sidetracking.* |
| co—*cleaning out.* | sg—*show gas.* |
| dd—*drilling deeper.* | si—*shut in.* |
| dk—*derrick.* | so—*show oil.* |
| dr—*drilling.* | so&g—*show oil and gas.* |
| fsg—*fishing.* | spd—*spudding.* |
| ft—*feet.* | sr—*straight reaming.* |
| hfw—*hole full of water.* | sw—*salt water.* |
| in—*inches.* | td—*total depth.* |
| lcn—*location.* | ur—*underreaming.* |
| m—*milling.* | wlh—*water in the hole.* |
| mim—*moving in materials.* | wo—*workover.* |
| mit—*moving in tools.* | wocs—*waiting on cement to set.* |
| mot—*milling on tools.* | wosr—*waiting on standard rig.* |
| n, s, e, w—*north, south, east, west.* | |
| oih—*oil in hole.* | |

SUTTER COUNTY—Buttes Oilfields' No. 4, 2-15-1, td 5800 ft, fsh dr pipe.

TULARE COUNTY—E. P. Jennings' No. 1, 4-24-23, td 2707 ft, plug 2300 ft, sd; No. 2, 33-23-23, rig. Trico Oil & Gas co.'s Valley 1, 36-21-25, rig.

MONTEREY COUNTY—Amil A. Anderson's No. 1, 15-24-14, dr conglomerate 820 ft. Shell's Branch 2, 34-24-10, dr shale 8543 ft.

SAN LUIS OBISPO COUNTY—Aviation Oil Co.'s Britnall 1, 10-11-35, td 1930 ft, sd. Barnsdall's K.C.L. A-1, 1-32-20, td 5220 ft, fsh dr pipe. I. L. Burch's No. 1, 3-10-26, sd 3209 ft. Burkholder Oil Corp.'s Clay 1, 14-10-26, td 3252 ft, waiting for dr pipe. Gretna Corp's Miano 1, 25-30-10, td 1040 ft, formation test set 910 ft, not conclusive. Pismo Pet. Co.'s No. 1, 5-32-13, td 4425 ft, junk in hole, sd. Temblor Oil Co.'s No. 1, 22-31-21, dr sand 1434 ft.

SANTA BARBARA COUNTY—E. C. Arnold's Arnold-Apache 2, 8-8-33, dr shale 1700 ft, os at 1450 ft. Cohn & Mitchell's Giacomiani 1, 18-10-34, ready to spud. Hancock Oil Co.'s No. 2, 6-7-32, grading. Leora Oil Co.'s Fithian 1, 8-4-25, td 1025 ft, co. Murdock & Allen's No. 1, 16-7-30, material on lcn. Nine Springs Oil Co.'s Brinkinhoff 1, 9-7-30, td 3300 ft, wocs 8⅝ in at 2750 ft. Oatman Rainbow Gold Mining Co.'s Midwest L-1, 28-4-27, dr shale 900 ft. S.E.D. Oil Co.'s No. 1, 27-10-34, rur. Tide Water Associated's Leonis 1, 3-6-33, grading. Union's Russell 1, 21-10-34, dr shale 2025 ft. Valley Oil Co.'s Chief 1, 21-9-34, td 2315 ft, ran formation tester, ran 1000 ft 5 in liner, including 500 ft perforated, bailing.

VENTURA COUNTY—Continental Oil Co.'s Castas 1, 7-3-23, dr hard shale 7022 ft. El Rio Oils—Canada's El Rio 1, 6-1-21, dr heavy oil sand, topped at 2100 ft, td 2383 ft. Speik Oil Co.'s Speik 1, 35-5-19, dr shale 2430 ft. Giovanni Vai's Scott 1, 4-4-21, td 175 ft, wocs 15 in at 165 ft.

### SOUTHERN CALIFORNIA

NEWHALL—Barnsdall's Rancho San Francisco 1, 26-4-17, td 6472 ft, killed flow, pulled liner, shot with nitroglycine, tested with swab, sanded up, liner frozen, trying to recover; No. 2, lcn. Holbrook Pet. Co.'s Newhall Land 1, 28-4-16, dr hard brown shale 5250 ft.

PICO CANYON—A. G. Burt's No. 1, 36-4-17, dr shale 1120 ft.

LYNWOOD—Calizoo Oil Co.'s Saulque 1, 9-3-13, dr sand and shale 4410 ft.

ARTESIA—Caltana Corp.'s Caltana 1, td 6234 ft in gray sand and shale, 40 degree dips, abn.

NORTH LONG BEACH—Geo. L. Clayton's Clayton 1, 32-3-12, dr sand and shale 4864 ft.

FOX HILLS—Country Club Oil Co.'s Country Club 1, 19-2-14, sd 3020 ft.

HERMOSA BEACH—C. M. Henderson's No. 1, td 2804 ft, casing parted, fsg.

DAVIDSON CITY—Hilldon Oil Co.'s Flood Control 1, 11-4-13, td 6105 ft, plug 5750 ft, sd.

WEST COYOTE—Hogan Pet. Co.'s McNally 1, 23-3-11, dr hard shale 5734 ft, no showings yet.

WALNUT—Julian & Criswell's Langstaff 1, 5-2-9, sd 1805 ft.

PALOS VERDES—McClaren Bros' No. 1, 27-4-14, td 3970 ft. redr to 1870 ft, r.

ROSECRANS—Shell's McKinley 4-1, 20-3-13, td 7744 ft, abn.

NEWHALL—Towsly Canyon Oil Co.'s No. 1, (formerly Community Oil Co. well), td 3200 ft, to redr.

ORANGE COUNTY—Mesa Oil Co.'s Mesa 1 (Newport), 29-6-10, dr hard shale 7437 ft. Signet Oil Co.'s Kraemer 1, 21-3-9, (formerly carried as Thomas & Moulton dr shale 750 ft. West American Oil Co.'s Irvine 1, 14-5-9, (Tustin) dr sand and shale 1350 ft.

## KANSAS

BARBER COUNTY—Pryor & Lockhart's Gant 1, cse¼ 7-31s-13w, rur. Barbara Oil Co.'s Holmes 1-27, cnw nw 27-33s-13w, rot rig.

BARTON COUNTY—C. L. Price et al's Kraft 1, sw nw ne 10-17s-11w, testing. C. L. Carlock's Leibel 1, se ne se 18-18s-11w, dr 3410 ft. Geo. Dickey et al's Boger 1, se se ne 15-16s-13w, co 3130 ft. C. L. Carlock's Ehly 1, ne ne se 5-18s-11w, co, pb 27 ft. C. H. Weaver's Stumps 1, ne ne ne 3-17s-12w, dr 3180 ft. Wakefield et al's Scheurermann 1, ne ne sw 31-16s-15w, dr 3070 ft. Stanolind O&G Co.'s Struder 1, se se sw 26-16s-13w, dr 2040 ft. Stanolind's Meggars 1, sw sw sw 21-20s-11w, rust 3341 ft. Continental Oil Co.'s Lamatsch 1, sw ne ne 26-17s-12w, dr 2810 ft. Magnolia Pet. Co.'s Zink 1, nw nw se 13-18s-11w, dr 2515 ft. Silverstein, George et al's Otto 1, se se nw 2-19s-14w, lcn. Republic Nat. Gas Co. & Continental's Moeder 1, ne ne sw 25-17s-13w, dr 305 ft.

BUTLER COUNTY — Vickers Pet. Co.'s Voth 1, cnl s½ sw ne 32-24s-4e, sd 3000 ft. Simpson Oil et al's Denn's 1-A, ne ne sw 15-26s-6e, mach. Maurer & Saco Oil Co.'s Connell 1, ne ne sw 27-29s-5e, ru.

CHASE COUNTY—Propp et al's Fromm 1, se se se 29-18s-9e, dr 2570 ft, sw.

CHAUTAUQUA COUNTY—E. I. Shaffer's Nuckalls 1, nw nw nw 12-33s-9e, dr 1625 ft. Ira Scott et al's Lambe 1, sw nw ne 18-33s-13e, dr 1530 ft. Robinson et al's Foster 1, sw sw sw 6-33s-12e, sd 200 ft.

COWLEY COUNTY—Ryan Consolidated's Couch 1, sw sw se 13-30s-5e, td 2842 ft, shot 50 qts, p 43 bbls oil and 7 bbls wtr. Elmer Ash et al's Bolack 1, nw nw se 22-32s-6e, sd 1702 ft. Bess & Gralapp et al's Wakefield 1, ne se sw 18-30s-6e, set 8-in csg 2119 ft, dr 2450 ft. Murta & Wilson, Turner 1, ne ne nw 30-32s-6e, dr 1200 ft. Blair, Continental & McKnab's Miller 1, ne nw sw 14-32s-5e, ru. Tulsa Oil et al's Dillon 1, nw nw ne 28-34s-3e, rig. McCoy, Amerada & Wentz' Anderson 1, se nw ne 34-34s-6e, dr 1535 ft. Tom Palmer et al's Ogroskey 1, se se nw 31-32s-5e, dr 665 ft. J. N. Wallace' Fee 1-A, sw se se 10-33s-4e, dr 1435 ft.

DECATUR COUNTY—Bruce et al's Newbold 1, cne sw 34-2s-28w, sd.

EDWARDS COUNTY—Royal Pet. Co. et al's Krupp 1, nw nw se 18-24s-19w, dr 3195 ft.

ELK COUNTY—Republic Nat. Gas Co.'s Glasscock 1, se ne sw 19-31s-11e, ponds.

ELLIS COUNTY — Empire's Samuelson 1, ne ne ne 31-11s-16w, woc. Mazda Oil Co.'s Henderson 1, sw sw ne 27-11s-18w, dr 2872 ft. Noble Pet. Corp.'s O'Laughlin 1, nw nw se 13-12s-19w, 5 bbls wtr 3855-58 ft, td. Bridgeport Mach. et al's Froelick 1, nw nw se 4-13s-16w, ur 8-in csg. J. C. Shaffer, Inc.'s Staab 1, se se se 25-12s-18w, dr 1950 ft. Austin Drlg. Co.'s Karlin 1, nw nw nw 13-12s-18w, mim. Twin Drlg. Co. et al's Craig 1, ne ne se 6-11s-16w, dr 1800 ft. Ted Kors et al's Koblitz 1, se sw nw 23-12s-18w, p 210 bbls oil, 24 hrs. Elwell & Trees Oil Co.'s Wickham 1, sw sw ne 10-11s-19w, cor 3306 ft. Billings' Smith 1, se se nw 14-12s-16w, co 2300 ft.

ELLSWORTH COUNTY — Orville Lee's Larkin 1, nw nw nw 15-16s-8w, dr 1395 ft. Frost et al's Dolechek 1, ne ne sw 36-14s-8w, sd 3008 ft.

GREENWOOD COUNTY—L. C. Balwanz' Travellers Ins. Co. 1, csw sw 23-26s-10e, dr 1900 ft. B & B Oil Co.'s Webb 1, cne se 3-26s-13e, dr 760 ft. Ward McGinnis et al's Hanley Estate 1, sw sw sw 25-25s-9e, dr 1030 ft. Van Deventer et al's Bemis 1-A, ne sw se 12-28s-11e, sd 1315 ft.

HAMILTON COUNTY—Denver P & R et al's Porter 1, sw sw ne 30-25s-41w, rur.

HARPER COUNTY—Carter Oil Co. et al's

Seihart Estate 1, csw nw 4-34s-8w, dr 5110 ft.

HARVEY COUNTY—E. J. & E. B. Shawver's Hege 1, ne ne se 26-22s-2w, dr 1700 ft. Simpson & Noble et al's Pierce 1, sw se ne 25-22s-2w, ru.

LOGAN COUNTY—Rosespring Drlg. Co. et al's Wright 1, cse se 12-15s-35w, dr pipe stuck at 4910 ft.

MARION COUNTY—Western Kan O&R et al's Suderman 1, se sw nw 22-20s-2e, cel.

McPHERSON COUNTY — Bradley Bros.' Barnholt 1, sw sw se 30-20s-5w, ur 8-in csg 2668 ft. Smith et al's Larson 1, nw nw sw 35-18s-5w, dr 1500 ft. C. E. Ash Drlg. Co.'s Broman 1, ne ne nw 19-17s-4w, rig.

MITCHELL COUNTY — Geo. Seidhoff et al's Greiss 1, sw sw se 16-8s-10w, sd 3002 ft.

NESS COUNTY—Newton Dev. Co.'s Tenny 1, nw nw se 19-18s-25w, sd 4379 ft, to re-run 6-in csg. Jones & Lanes' Page Milling Co. 1, se se nw 36-18s-26w, rig.

PAWNEE COUNTY—Canshaw et al's Riederer 1, cw½ nw se 29-21s-19w, td 4523 ft, D&A.

RENO COUNTY—Clyde Pulse et al's Payne 1, sw nw ne 4-22s-7w, fsg csg. Imo O&G Co. et al's Watkins 1, se se se 14-22s-7w, dr 1700 ft. Westgate-Greenland Oil Co.'s O'Sullivan 1, sw sw ne 24-23s-5w, dr 3909 ft. Sinclair Prairie's Nett 1, nw nw se 32-26s-4w, dr 3882 ft.

RICE COUNTY—L. E. Douglas' Coyne 1, ne se se 24-21s-8w, dr 3170 ft. John Hanna et al's Fulton 1, nw nw ne 24-19s-6w, ur 8-in csg 3070 ft. Fred Phillips et al's Hubenett 1, sw ne sw 23-20s-8w, dr 3005 ft. Union O&R Co. et al's Baker 1, sw sw ne 33-20s-6w, ur 8-in csg 3150 ft. Comanche Oil Co.'s Cramm 1, sw sw se 15-19s-9w, dr 1500 ft. Hipple et al's Wernett 1, ne ne nw 11-20s-6w, dr 1810 ft. Empire O&R Co.'s Bredfeldt 1, cn½ n½ sw 7-18s-9w, td 3240 ft, 900 ft oih 8 hrs, testing. Shell Pet. Corp.'s Haxton 1-B, ne ne sw 29-18s-9w, dr 1760 ft. Stanolind O&R Co.'s Mooney 1, ne ne sw 5-19s-10w, lcn. H. V. Holland et al's Brothers 1, se se se 12-21s-7w, mim. Skiles et al's Helmer 1, nw nw ne 7-19s-8w, dr 1295 ft.

ROOKS COUNTY—Lester & Dean's Burtt 1, se se ne 29-10s-20w, sd 3947 ft. Jones Bros. Drlg. Co.'s Wiss 1, nw nw nw 8-10s-8w, ur 6-in csg 3230 ft. Basin Oil Co.'s Baxa 1, ne ne ne 23-9s-17w, td 3630 ft. S. C. Hoel et al's Ives 1, sw sw ne 11-7s-18w, sd 485 ft. Brunson Drlg. Co. et al's Casey 1, se se ne 22-9s-16w, dr 1565 ft. Graham et al's Fiek 1, sw sw sw 9-9s-17w, fsg 3301 ft. C. R. Craft et al's Ziegler 1, ne ne sw 8-10s-16w, surf hole.

RUSH COUNTY — S. A. Murphy et al's Roth 1, nw nw sw 21-16s-18w, fsg 2605 ft. Duee & Brouk's Lebsack 1, se se ne 13-16s-16w, dr 1380 ft. Westgate-Greenland Oil Co. et al's Greenwalt 1, nw nw ne 19-19s-16w, dr 1640 ft.

RUSSELL COUNTY—S. A. Murphy et al's Deines 1, se se sw 36-15s-15w, sd 3075 ft. Goldstein & Vernon O&G Co.'s Steinert Estate 1, ne se sw 34-15s-15w, sd 1130 ft. Aylward et al's Jones 1, se se nw 22-14s-13w, dr 805 ft. Equity Gas Co.'s Harbauk 1, nw ne sw 19-13s-12w, sd 2287 ft, dr 2420 ft.

SCOTT COUNTY—Olson Drlg. Co. et al's Nolan 1, nw nw ne 13-19s-33w, dr 3550 ft.

SEDGWICK COUNTY — Cameron et al's Smith 1, sw se se 13-27s-2e, fsg 3272 ft. Swearer's Thome 1, sw sw nw 19-28s-1w, td 3836 ft, D&A. Roxana Drlg. Co. et al's Woodman 1, sw nw sw 26-26s-1w, sd 2469 ft. E. B. Shawver's Furman 1, sw ne se 24-29s-3w, td 1865 ft, to skid rig.

STAFFORD COUNTY—W. P. Faulkner's Schulz 1, se se ne 6-22s-13w, ru.

SUMNER COUNTY—Graham et al's Dawson 1, nw nw nw 4-33s-2w, fsg 4255 ft. The Texas Co.'s Harper 1, ne sw se 9-30s-3w, dr 4152 ft. Gilmac Oil Co. et al's Proud 1, sw se se 33-30s-1w, dr 793 ft. John Burton et al's Springate 1, ne ne sw 30-33s-2e, rig.

TREGO COUNTY—W. I. Southern's Latimer 1, nw nw se 19-15s-22w, dr 2450 ft. Turner et al's Rogers 1, csw¼ 3-15s-23w, cel.

WOODSON COUNTY—Katz et al's Guy 1, sw sw se 6-24s-15e, sd 1643 ft. B & B Oil Co.'s Lockard 1, nw nw ne 2-26s-13e, mach. M. B. Allen's Flack 1, ne ne nw 1-26s-14e, dr 1075 ft.

## OKLAHOMA

ALFALFA COUNTY—Olson Drlg. Co. et al's Acre 1, csw ne 14-24n-11w, co 5885 ft.

BECKHAM COUNTY — Mid-American Oil Co.'s Biscoe 1-A, sw sw sw 28-8n-22w, fsg 1930 ft. Carter Oil Co.'s Porter 1, csw sw 36-10n-25w, dr 1820 ft. Carter's Bingham 1, ne ne ne 31-8n-26w, dr 1226 ft.

CLEVELAND COUNTY — Hollenback's Stinson 1, nw nw ne 17-9n-2w, sd 6195 ft.

COMANCHE COUNTY — C. V. Morris' Young 1, se ne se 24-3n-10w, dr 1000 ft. C. Holliday's Kuntz 1-A, cse ne se 21-4n-11w, dr 2450 ft.

CREEK COUNTY—Mosier et al's Holcomb 1, se sw ne 19-18n-8e, dr on bailer 2935 ft.

GARFIELD COUNTY—Ohio Oil Co.'s State 1, sw sw sw 13-23n-2w, dr 4670 ft.

GREER COUNTY — Nelf-Godfrey-Andrea's Melton 1, cse nw se 16-3n-22w, dr 3220 ft.

HASKELL COUNTY—Continental Oil Co.'s Anderson 1, sw se ne 33-8n-20e, dr 3020 ft.

HUGHES COUNTY—Cap Rock Oil Co.'s Parks 1, csw se 34-7n-8e, dr 3510 ft. Chas. Thornton's Eason 1, ne ne nw 7-9n-11e, rust and sd for wtr. E. H. Moore's Buck 1, nw sw sw 21-8n-10e, spd.

JEFFERSON COUNTY—Gulf Oil Corp.'s Woodworth 1, cnw nw ne 20-3s-4w, td 3117 ft, D&A. Olson, Heenan & Coe's Rose 1, csw sw 1-5s-5w, dr 4205 ft. A. T. Campbell et al's Trout 2, cw½ w½ ne 6-8s-7w, dr 2190 ft.

KAY COUNTY—Higdon et al's Nieman 1, ne nw ne 9-26n-3e, sd 400 ft.

KIOWA COUNTY — Kiowa Oil Corp.'s Finder 1, csw ne 4-6n-20w, sd 130 ft. Argus Pet. Co.'s Osbourne 1, nw nw ne 9-7n-16w, set 5 3/16-in csg 1233 ft, woc.

LATIMER COUNTY—Clark Drlg. Co. et al's Wilson 1, cse se 15-5n-18e, dr 4600 ft.

LeFLORE COUNTY—McGraw et al's Tidwell 1, cnw 17-3n-22e, td 3505 ft, D&A.

LINCOLN COUNTY—Mid-Continent Pet. Corp.'s Logan 1-A, ne ne se 31-11n-5e, pop. Exchange Drlg. Co.'s Dowell 1, se se nw 10-14n-6e, td 3065 ft, to shoot.

LOGAN COUNTY—Helmerich & Payne et al's Randall 1, sw sw ne 24-16n-1w, dr 4297 ft. Eason Oil Co.'s Sisters 1, sw sw sw 24-17n-1w, dr 5423 ft.

MARSHALL COUNTY—Stewart & Taylor's Chestnut 1, ne ne ne 23-8s-5e, tested 18 bbls oil first 8 hrs, sd.

MURRAY COUNTY—Russell's Fee 1, se nw se 9-2s-3e, dr 1910 ft. O. O. Owens' Fryer 1, ne se ne 34-1s-3e, dr 1310 ft.

NOBLE COUNTY—Lincoln Oil Co. et al's Neil 1-A, ne ne ne 15-23n-2w, dr 4749 ft. Summitt Drlg. Co. et al's Dolezal 1, se se sw 8-22n-1w, dr 3920 ft. Magnolia Pet. Co.'s Forsythe 1, se se sw 23-21n-2w, dr 4274 ft. Stanolind & Amerada et al's Johnson 1, nw nw se 4-20n-2w, rig.

OKFUSKEE COUNTY — Oklahoma Oil Corp.'s Campebll 1, se se ne 8-10n-9e, td 1860 ft, D&A.

OKLAHOMA COUNTY—Sunray Oil Co.'s Dickson 1, nw nw nw 17-11n-1e, mit.

OSAGE COUNTY — Helmerich & Payne's No. 1, ne ne se 13-23n-6e, dr 1688 ft. Mid-Co Oil Corp.'s No. 1, se se sw 22-23n-6e, dr 180 ft.

PAWNEE COUNTY—Carter Oil Co.'s Wells 1, ce½ se nw 30-23n-5e, rig and rust.

PAYNE COUNTY—H. F. Young's Jenkins 1, se ne se 4-17n-3e, dr 4595 ft. Riddle's Van Zandt 1, nw nw se 16-18n-3e, dr 2300 ft.

PONTOTOC COUNTY—Southern Oil Co.'s Young 1, ne ne se 17-3n-7e, mach and sd. Papoose Oil et al's Jones 1, nw se nw 2-4n-5e, dr 2185 ft. Delaney et al's Norris 1, nw nw se 18-4n-8e, pull 10-in csg. Roodhouse et al's Booth 1, se nw se 20-2n-6e, rig. Clark Drlg. Co. & Delaney's Richardson 1, se se sw 30-4n-8e, dr 95 ft. Caloma Oil Corp.'s Brentz 1, se ne sw 4-1n-6e, td 1010 ft, sd. Sandbach et al's Whittaker 1, nw ne se 31-4n-6e, rur. Boettcher O&G Co.'s Cann 1, se nw ne 25-4n-7e, rur.

POTTAWATOMIE COUNTY—Stanolind & Amerada's Bullington 1-B, sw se sw 32-9n-3e, rur. Richborn Oil Co.'s Fidler 1, ne ne nw 9-5n-5e, bldg rig.

PUSHMATAHA COUNTY—Erle Halliburton et al's Bogwell 1, sw ne ne 30-3s-15e, dr 1320 ft.

SEMINOLE COUNTY—Sinclair Prairie's Rossana 1, nw nw sw 28-10n-8e, flow 1317 bbls oil, 12 hrs thru csg, cut 3.6% wtr. J. E. Hall et al's White 1, se nw se 30-6n-8e, td 2610 ft, pb 1275 ft, shot with 20 qts, p 18 bbls oil 24 hrs, comp. Amerada & Stanolind's Reed 1, se sw se 19-10n-8e, sdo. A. I. Spears' Keaton 1, nw nw nw 6-5n-8e, td 3129 ft, D&A.

STEPHENS COUNTY—Edwards' Frederick 1, ne se nw 31-2n-8w, td 2754 ft, sd. Carter Oil Co. et al's Harley 1, cne ne 24-2s-4w, woc 5206 ft. Helmerich & Payne's Graham 1, csw sw ne 12-1n-5w, mudded in gas and sd. Penn State Oil Co.'s Cole 1, cw½ sw ne 21-2n-8w, dr 5159 ft. Wm. Angle et al's Sid Lang 1, sw sw ne 24-1n-7w, sdo 3525 ft, cont depth. G. L. Pace et al's Tah-su-dah 1, se nw sw 27-1s-9w, sdo 2707 ft. Coline Oil Co.'s Johnson 1, csw se ne 1-2n-8w, td 6500 ft, new cont to 2000 ft.

TEXAS COUNTY — Cabot Carbon Co.'s Calvert 1, C sec 14-3n-16ecm, dr 2643 ft.

TILLMAN COUNTY—I. T. I. O. Co. et al's Hatler 1, csw ne 32-2s-17w, testing. Magnolia Pet. Co.'s Brown 1, csw se ne 21-3s-18w, dr 4710 ft.

## SOUTH TEXAS

### LAREDO DISTRICT

DUVAL COUNTY—A. J. Brinkoeter's P. Garza de Rodriguez, sur 212 td 2665 ft, set 7-in 2657 ft snd 2657-65 ft, stdg 1100 ft oil in hole waiting on pump. Hiawatha Oil & Gas Co.'s Southland 2, Section 15 Ball ranch sub, perf 5100 -05 ft, complete as gasser estimated 15 million cubic feet, td 5939 ft. Highland Oil

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Co.'s (Russ et. Co.) A. Faris 1, Sec 9, Sweden subd, oil snd 4795-4804 ft, dst 10 min, 4792-4804 ft, ¼ in top and ⅜ in bottom chokes open 10 min build up 120 lbs press, t/choke increased to 2 in, left open 13 more min, and well flowed PLO running csg, 19 ft lower than Gravis, td 4804 ft. Humble's Roos Bros. 1, sur 119 td 2871 ft, snd 2860-71 ft, pumped 50 bpd. King Drilling Co.'s Atlee Parr 1, 400-ac tr, San Andres gr, lcn only. George Parr Oil Co.'s F. Vaello Puig 1, San Andres gr, dr 3400. Penn-Palangana Oil Co. et al's C. K. Gravis 1, Sec 254, drilling 1200 ft. Reynolds & Richardson's D. Ruiz Est. 2, C. & M. Ry. sur No. 125, sp. Smith & Storey's F. G. Wilson 1, blk 9 Sweden sub, dr 400 ft. Trahan & Tuttle's J. C. Megerle 1, sur 245, sd 900 ft. George V. Viteri et al's Emilio E. Cadena 1, blk 6, G. Stewart Oil & Gas Co., subd, dr sh 4230 ft. W. H. Wollett's and M. D. Masten's Bishop Cattle Co. 1, sur 74, lcn.

JIM HOGG COUNTY—Nordan & Morris' Badger 1, sur 640, dr 1830 ft.

McMULLEN COUNTY—H. K. Boysen's J. E. Murphy 1, J. E. Murphy sur, coring 2122 ft. De-Sel Oil Co.'s Lucy M. Claunch 1, M. Hely sur, coring 1030 ft. Harrison & Danvers' J. A. Jungman 1, M. Hely sur, dr 862 ft. W. L. Hinds' Douglas W. Rhodes 1, sec 54, ru. Humble Oil & Refining Co.'s H. C. Edrington 4, sur 65, D&A 2965 ft (below). W. P. Howard's B. C. Claunch 8, M. Hely sur, set 7 in csg 1106 ft, woc, td 1110 ft. Howell Oil Co.'s J. H. Martin Hrs. 1, sur 213, dr 2120 ft. Edwin M. Jones' Harry Ezzell 3, Thos. Adams sur, completing as oil well in pb hole at 1260 ft, td 5301 ft; Harry Ezzell 6, H. Russell sur, pits wo rig. J. T. Lanier's E. R. Hagist 1, sur 481, dr 900 ft.

STARR COUNTY — Calderoni - James - Follette's Francisco Rodriguez 1, por. 80 J. of Camargo, woc, td 100 ft. John H. Clopton et al's Dionicio Tijerina 4, blk 12, sh 14-C, por 80, J. of Camargo, sd for heavier rig, td 1630 ft. Cook's Maris', Arnold's Starr County Cattle Co. 2, Cook, Maris, Arnold sur, sd below 2200 ft. W. F. Dolgener et al's Y. Garcia de Garcia 1, sh 7-B, Porcion 71, J. of Mier, coring 402 ft. K. E. Merren's Starr County Cattle Co. 1-A, blk 34, coring for Cockfield 5360 ft. Henry Mode et al's Kelsey Bass 1, blk 7, sd 156 ft. Moss' & Heard's S. B. Ricaby 2, por 83, J. of Camargo, tested sw, sd, woo, td 1925 ft. F. P. Schwab & Fred Foster's Antioco Munoz et al 1, Javali Grant, dr 1500 ft. Transwestern Oil Co. et al's T. B. Slick Est. 2, sec 527, recemented again to straighten hole, td 5659 ft.


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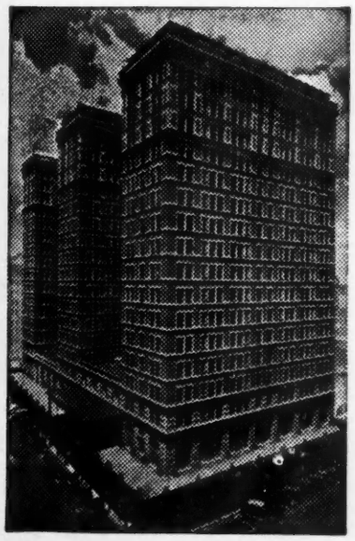

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WEBB COUNTY—Bolling & Coffey's A. Villareal 1, blk 17, sur 768, topped Rosenburg sand, saturated show, sd for repairs, td 1815 ft. Eugene Garner, Jr.'s R. Saldivar 2, sur 657, nippling up to dr plugs, td 1000 ft. Ina Oil & Ref. Co. and F. M. Shaver's W. E. Trafton 1, sur 281, part of tools on lse, stdg. Kepley Prod. Co.'s W. C. Billings 1, sur 6, coring 2283 ft. J. W. Magee's E. Garcia 1, Henry James subd, blk 21, stdg 40 ft. Locke Purnell & Cole Pet. Co.'s Rosa Benavides 1, sur 677, abnd 3508 ft.

ZAPATA COUNTY—Lewis Prod. Co.'s Martinez 1, blk 123, sh 1, dr 1492 ft. H. Q. Lewis' S. Benavides 1, blk 39, ran electric formation tester, stdg waiting on orders, td 2039 ft. Lundell Prod. Corp.'s I. Ramirez 1, blk 25, dr below 2400 ft. J. O. Sheffield's C. H. Buck 1, sur 273, lcn. Westheimer & Daube's E. Lopez 1, sur 288, dr 1000 ft.

### SAN ANTONIO DISTRICT

BASTROP COUNTY—Marts & Beavens' R. A. Harris 1, Timothy McKean sur, dr 1600 ft.

BEXAR COUNTY—Algra Oil Co.'s Edward G. Peters 1, Miguel Gotari sur, td 815 ft, ru. w heavier rig. American Gas Co.'s Oliver 5, M. F. Rodriguez sur, resume drilling, td 3425 ft. Carle Chemical Co.'s Frank P. Carle 1, 343-ac tr, dr rock 204 ft. Albert Chmel's Theresa McIntosh 1, J. W. Garrity sur, temp. abnd, td 805 ft. C. E. Euton's Louis F. Ridder 1, Jose M. Baererra sur, showing for small gas well, tp 300 lbs, td 835 ft.

CALDWELL COUNTY—B. C. Armstrong et al's Wilson Bell 1, n portion Luling Townsite drk. R. T. Belcher's Mrs. G. Moody 1, Solomon Seal sur, still lcn. Cavanaugh et al's J. G. Cartwright 1, sp. E. R. Cosby's W. H. Cosby 1, Maxwell sur, drilling plugs 1847 ft. Adolph Dovre's M. W. Calliham 1-A, Dillard Cooper sur, will acidize, td 2235 ft. Fain Gillock's Mrs. J. P. Walder 1, A. Floyd sur, lcn. W. E. Housel et al's M. C. Driscoll 1, James Berry sur, sd 1544 ft. J. O. Mack's B. Withers 1, W. House sur, drk up. McNeil Pet. Corp.'s Will Clark 1, J. R. Miller sur, sp. Sherman Nelson's A. B. Ethridge 1, Thad Hunter sur, moved in lighter rig and wo in effort to comp. in chalk, td 2180 (?). Rosita Oil Co.'s Lockhart State Bank 1, John Roe sur, lcn. Stapper Pet. Co.'s E. Martin 1, A. Floyd sur, mir. F. R. Williams' H. L. Rodenberg 1, James Berry sur, dr 500 ft.

DIMMITT COUNTY—Wilcox Oil & Gas Co.'s Light Ranch 1, I&GN sur, dr 5795 ft.

EDWARDS COUNTY—Dan Auld's Rigsby 1, GC&SF sur, dr plugs 3040 ft.

PEARSALL COUNTY—Amerada. Harrigan 1, Salvador Flores sur. still trying to get to bottom td 6290 ft. H. A. Pagenkopf & L. C. Jameson Blackaller Est. 1, James Gourley, lcn.

GUADALUPE COUNTY—R. T. Belcher's J. T. Fulcher 1, Robt. Smith Sur set sur csg woc. J. Kenneth Blackmar et al's Cora & J. E. Mackey 1, James Hodges sur set 7 in csg 2445 ft dr plugs and testing td 2662 ft. J. E. Clark's Paul Knodel 1, Green Dewitt sur dr 2300 ft. Louis Crouch et al's King 1, J. D. Clemonts sur, dr plugs & testing td 2230 ft. Ralph E. Fair, Inc. Fritz E. Hemple 1, G. W. Williams sur, dr 100 ft. Felmont Oil Corp.'s Lizzie Schueneman 1, Martin Hoffman Tr. Green Dewitt sur dr 2415 ft. Kennedy & Crowley's Gus Jahns 1, Jose K. Davis Sur. acidized w/200 gals now flowing through csg td 2507 ft. Riddle Oil Co.'s Ned Herff 1, Eligio Gorari Sur. SD 2209 ft. V. G. Schimmel et al's Mrs. Wilhelmina Schneider 1, Jesus Cantu sur. testing 2132 ft.

HAYS COUNTY—N. G. Williams' Jennings 1, Venmonds Sur. lcn.

MEDINA COUNTY—Frank A. Brown's A. F. Brucks 1, John Ward sur, Reinstate to dd, td 760 ft.

REAL COUNTY—Sun Dietert & Oppenheimer 1, P. R. R. sur, d & a test 250 ft of briney water 5953-5956 ft td 5956 ft.

WILSON COUNTY—Maryland Oil Corp. et al's Cynthia N. Tremmell 1, M. May Sur set 10 in csg 800 ft woc.

ZAVALA COUNTY—H. F. Wilcox's T. J. Gillam 1, Sec 11, flowed 2 bbls per min on short tests will kill & cement 7 inch casing. td 3947 ft.

### CORPUS CHRISTI DISTRICT

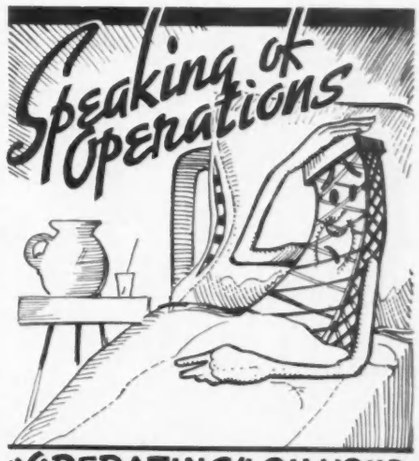
ARANSAS COUNTY—Barnsdall's Edwards 1-A, Wm. Lewis dr 7821 ft.

BEE CONUTY—Butler's & Turner's J. R. Scott 1, Howeth & Swiger sub dr 2985 ft. Lonnie Glasscock's J. B. Ablinger 1, John Ryan Sur junked and abnd attempted to sd/tr but went into old hole td 5945 ft. Illinois Pet. Corp.'s Mr. M. M. McKinney 2, L. C. Randolph sur sp R. B. Swiger et al's Homer Harris 1, P. Wilcox Sur MIM.

BROOKS COUNTY—Gillord Oil Co.'s Wm. Singer 1, Sur 630, dr 165 ft. Standard Oil Co. of Texas Mestina Oil & Gas Co. 1, Solinas Sur t thin snd 3921 ft did not test set 10¾ in csg 3968 ft prep to dr ahead; Mestina O&G Co. 6, R. G. Salinas Gr making dst 2992-3002 ft.

CAMERON COUNTY—Stapper Pet. Corp.'s Port Isabel Irr. Co. 1, blk 17, dr 7810 ft.

GOLIAD COUNTY—Brown & Wheeler's J.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R. Kauffman 1-G, P. Trevino sur sd for orders not yet abnd td 4605 ft. Goliad Oil Co.'s S. E. Cole 1, Lot 33 Range 4, dr 5100 ft.

JIM WELLS COUNTY—John Camp Prod. Co.'s J. W. Bird 1, Los Presenos dr 4582 ft. Magnolia et al's A. A. Seeligson 7, Los Jaboncillos sur, set 13⅜ in csg cemented w 575 sx td 996 ft. Premont Royalty Co.'s H. Felaey 1, Sec 72, set sur csg woc. Smith Drlg Co.'s W. D. Wade 1, 1 mi e production of Sandia field, dr below 3000 ft. Tsesmelis & Reese's Martha Earhart 1, John Suggs sur trying side wall test at 3100 ft td 4005 ft Wellington Oil Co.'s Sevier 1, Ab 545 La Anima Sola Gr. dr 2480 ft fresh water in 2250 ft snd td 2480.

LIVE OAK COUNTY—R. A. David's John & J. P. Marbach 1, Stephen Hays sur dr 485 ft. Empire Fuel & Standard Co. of Texas' George West 1, George West sub d & A 3051 ft. R. H. Feltner's Sanger Ranch 2, G.C.&S.F. Sur sp & sd will resume. Loma Oil Co.'s C. L. Terrell 1, J. Houghihan Sur lcn F. D. Salter et al's I. W. Griffith 2, Sec 20, resume dr td 887 ft. Sam Wilson, Jr.'s Southwestern Life Ins. Co. 1, Sec 57, dr 2265 ft.

NUECES COUNTY—Clarkwood Oil Co.'s H. B. Baldwin 1, Russell Farm Lots reaming 6130 ft. Fain Gillock et al's Rob't. Poenisch 1, Sec 32, ru. Lonnie Glasscock's Kansas Life Ins. Co. 1, Luciano Rivers Sur D&A td 6030 ft. W. L. Hinds' Lucy J. Rivers 1, Sec 301, sp & sd. Navarro Oil Co.'s E. M. Poenisch 1, blk 41 lot 21, MIM. Phillips Pet. Co.'s John Harney 1, Sh 11, Harney Lands wshg to btm td 4279 ft. Seaboard Oil Corp.'s James P. Luby 1, Luby subd blk 4, dr 2400 ft. Shell Pet. Co.'s State of Texas 1, Laguna Madre Bay, piling driven & sd. Southern Minerals Corp.'s Richard King 1, Sec 32 King Farm Lots dr stem stuck td 6515 ft. Taylor Pet. Co.'s J. V. Stiles 1, Sec 18, dr 2932 ft. United Prod. Corp.'s W. H. Harvey 1, Garcia Sur flowed 125 bbls fluid of which 25 bbls oil 100 bbls sw ⅛ in ch TP 2650 lbs. Cp 3250 lbs will re-work td 9002 ft.

REFUGIO COUNTY—Chew & McIntyre's Willie & Emma Dasman 1, Sec 16, lcn for 6500 ft. test.

SAN PATRICIO COUNTY—Conroe Drilling Co.'s F. L. Foley 1, C. F. Delmas sur lcn for 6500 ft test. Danrey Oil Co.'s Jean Davis 1-A, Wm. Boyd Sur drk. Phillips' B. E. Ivey 1, Sec K. MIM.

VICTORIA COUNTY — Magnolia's Willie Beck 1, T.N.O. RR Sur perf 3574½-3578. Shut in 5 hrs opened 4 hrs flowed wsh wtr 3 min then flowed dry gas ⅛ inch ch tp 900 lbs. CP 1500 lbs td 4812 ft. Transwestern Oil Co.'s A. M. McFaddin 3, J. Viarin sur dr 3979 ft.

## EAST TEXAS

ANDERSON COUNTY — Tom F. Hunter, Jack Frazier & American Liberty Oil Co.'s G. E. Gage 1 (160-ac), C. B. Gilbert sur, 2 mi se Blackfoot, elev 384 ft, Pecan chalk 2850-3004 ft, Austin chalk 3980-4376 ft, top Woodbine 4782 ft, top Red Beds 4989 ft, top Georgetown lime 5681 ft, top Paluxy 6758 ft, top first Glen Rose 7029 ft, anhydrite stringer 8085-8120 ft, massive anhydrite 8415-8523 ft, tested salt water 9150-9205 ft, dry and abnd. Roeser-Pendleton, Inc.'s V. W. Bowyer 3 (200-ac), E. Ritter sur, Cayuga field Trinity test, elev 317 ft, top Woodbine 3991 ft, top Georgetown 4749 ft, dr 6650 ft. Barnsdall Oil Co.'s H. C. Swanson 1 (243-ac), Richard Duty sur, Jarvis area, sp. Tide Water Associated-Seaboard Oil Corp.'s Monnig Bros. 7 (3806.82-ac), S. Sanchez sur No. 1-11, Long Lake field Trinity test, elev 233 ft, Pecan chalk 3565-3766 ft, Austin chalk 4687-4957 ft, top Woodbine sand 5273 ft, top Georgetown lime 5904 ft, top Paluxy 7010 ft, top first Glen Rose 7205 ft, top first anhydrite 8333 ft, massive anhydrite 8643-8748 ft, coring 9680 ft.

BOWIE COUNTY—Ferguson & Hill's A. Y. Breckenridge 1 (412-ac), Nancy Dycus sur, 4 mi w Texarkana, top Annona chalk 1308 ft, top Blossom sand 2063 ft, dr 2680 ft. Sutton & Hawkins' N. M. McDuffey Harris 1, (389.45-ac), John Ball sur, 3 mi se New Boston, elev 333 ft, top Annona chalk 1472 ft, top Georgetown lime 2847 ft, top Paluxy series 3350 ft, top anhydrite stringer 4495 ft, top massive anhydrite 4640 ft and base 4825 ft, pb fr 4924 to 4724 ft, set 2 whipstocks and failed to sidetrack. Mrs. S. O. Thompson & Jaffe's C. W. Rosemond 1 (424¼-ac), Jefferson Milam sur, 3 mi sw Red Water, sd 5250 ft. Woodley & Bentley's J. D. Lumpkin 1 (245-ac) John McDermott sur, 1¼ mi sw Dalby Springs, elev 290 ft, td 4404 ft, pb to 1300 ft, re-dr 3115 ft.

CHEROKEE COUNTY—Stoco Oil Co.'s E. B. Parks 1 (17 2/3-ac), J. T. Cook sur, 4 mi sw Rusk, elev 417 ft, pb fr 3210 ft to re-dr hole.

COLLIN COUNTY—Foster Jones et al's Ann Sherley 1 (54.44-ac), Gwynn Morrison sur, ½ mi e Anna, top Paluxy 2123 ft, top first anhydrite 2725 ft, sd 2999 ft.

DELTA COUNTY—F. J. Estes et al's W. S. McGee 1 (207-ac), J. G. Oliver sur, 2 mi sw Klondike, elev 449 ft, top Georgetown lime 3305 ft, sd 4001 ft.

FALLS COUNTY—J. Edward Mills et al's Sam Grucholski 1 (40-ac), Dennis Herold League, 5 mi sw Kosse, elev 521 ft, top Edwards lime 3867 ft, top upper Glen Rose 4074 ft, cem 5 3/16 in cas 5374 ft, td 5526 ft, will gun-perforate cas.

FREESTONE COUNTY—C. F. Lytle et al's Roy Simmons 1 (28.83-ac), R. B. Longbotham sur, ½ mi s Wortham. Trinity test for depleted field, sd 3820 ft. L. R. Stroud & C. A. Buzzard's Sneed 1, R. D. Sloan sur, 6 mi ne Fairfield, sd 341 ft.

HENDERSON COUNTY — Humble, Tide Water Associated & Seaboard Oil Corp.'s McElreath-Suggett 1-C (149-ac), W. P. Wyche sur, 1½ mi nw Opelika, elev 394 ft, Pecan chalk 2580-2730 ft, Austin chalk 3710-4110 ft, top Woodbine series 4137 ft, top sand 4204 ft, top Georgetown 4950 ft, top Paluxy 6006 ft, top first Glen Rose 6270 ft, top anhydrite stringer 6930 ft, oil pay 7185-7195 ft, cem stuck 4½-in drill pipe 7160 ft, flows 8 bbls oil daily, temporarily completed; McElreath-Suggett 2-C, 880 ft se 1-C, rur. Wm. McDougall, Tr. et al's Trinity Farm Sec. Co.-R. M. Manning 1 (200-ac), H&TC Ry. sur, 4 mi s Malakoff, mim.

HOPKINS COUNTY—Carpenter Oil Corp.'s C. D. Gillis 1 (53¾-ac), W. A. Smith sur, 2¾ mi e Cumby, elev 593 ft, cem cas 105 ft. H. & W. Development Co.'s Pan-American Life 1 (136½-ac), Agaton Caro sur, 6 mi se of Brashear, elev 506 ft, Pecan chalk 2159-2272 ft, sd 2918 ft. F. D. Jones et al's A. A. Basham-Gulf 1 (207-ac), Wm. Cole sur, elev 435 ft, dr 2600 ft.

HOUSTON COUNTY — American Liberty Oil Co. et al's W. L. Moody 1 (55-ac), S. C. Parker sur, 2½ mi nw Grapeland, dr 500 ft. Placid Oil Co.-Shell Pet. Corp.'s J. E. Elliott 1 (200-ac), J. M. Procella sur, 6 mi ne Grapeland, elev 371 ft, Pecan chalk 4590-4955 ft, Austin chalk 5587-5869 ft, top Woodbine series 5870 ft, td 6634 ft, pb and gun perf cas 5868-70 ft, flows 12 bbls fluid per hr, 99 percent salt water. C. & G. Oil Co.-Duval Williams' E. M. Young 1 (34-ac), J. J. Thomas sur, near Lovelady, dry and abnd 2217 ft.

HUNT COUNTY—Stanolind O&G Co., M. J. Delaney et al's Jessie P. Hawkes 1 (110-ac), Robt. Ragsdale sur, 1½ mi w Campbell, Trinity test, elev 566 ft, top Woodbine 2880 ft (cut fault 1275 ft), top Georgetown lime 3730 ft, top Paluxy 4388 ft, tested salt water, coring 4475 ft

KAUFMAN COUNTY—J. M. Scott & J. B. Woodside's Wood & Temple Nash 1 (80-ac), Juan Cortez sur, 1 mi e Scurry, elev 401 ft, Gober chalk 1300-1400 ft, sd 2510 ft.

LAMAR COUNTY—Cooper Bros. & Sallee's L. P. Haynes 1 (100-ac), Luke Roberts sur, 1 mi w Deport, elev 458 ft, chalk 85-340 ft, top Red Beds 1786 ft, top Paluxy 2710 ft, dry and abd 2768 ft. Blackman & H. W. McGee's J. M. Duck 1 (75-ac), J. C. Lamb sur, near Powderly, lcn.

LIMESTONE COUNTY — Pure Oil Co.'s W. B. Kendrick 16-T (96-ac), 3 mi w Mexia, Mexia field Trinity test, elev 508 ft, Austin chalk 2210-2522 ft, top Woodbine 2896 ft, cem 11¾-in cas on Georgetown lime 3434 ft. A. W. Phillips & J. Johnson's E. M. Wright 1 (136½-ac), A. Varella-M. Herrin sur, 4 mi ne Groesbeck, elev 415 ft, Pecan chalk 2450-2520 ft, Austin chalk 2720-3003 ft, sd 3695 ft.

RUSK COUNTY—John C. Mayo et al's Harrison-S. C. Sanford 1 (161-ac), Wm. A. Corder sur, 10 mi e Mount Enteprise, elev 252 ft, Trinity test, lcn. John W. Merritt et al's J. M. Tipps 1 (250-ac), Thomas Uzzell sur, 5 mi n New Salem, cem surface pipe.

VAN ZANDT COUNTY — Humble O&R Co.'s L. K. Riggs 1-A (74.2-ac), Wm. Daniel sur, ne edge Van field, rur. Glenn et al's E. Core 1, H. Ball sur, 3 mi n Edom, lcn. Spratt Oil Co. (was Stroud & E. N. Lowe's) P. L. McNeill 1 (104-ac), J. W. Guest sur, 4 mi n Ben Wheeler, elev 510 ft, sd 684 ft.

## EAST TEXAS BORDER COUNTIES

CASS COUNTY—McAlester Fuel Co.'s J. J. Dooley 1, Calloway Davis sur, elev 246 ft, Georgetown lime 3690-4401 ft, top Paluxy 4530 ft, top first anhydrite 5797-5870 ft, dr 6094 ft shale and lime. Magnolia's Harper & Thatcher 1, Jacob Carsner sur, pb to 5965 ft, swabbing old td 6675 ft. United's J. W. Land 1, Robt. Potters sur, coring 7232 ft.

MARION COUNTY—Ark. La. Gas Co.'s C. C. Braden 1, Thos. Hanson sur, top anhydrite stringer 5181 ft, dr 5217 ft. Laura McIntosh 1, Wm. Edmondson sur, claim so&sg 6654-6665 ft, pb to 5980 ft, old td 6925 ft. The Hunter Co.'s E. W. Fonda 1, A. de los Santos Coy sur, 7-in csg 6082 ft, gauged 283 bbls oil in 24 hours through half-inch tubing choke, tubing pressure 60 pounds, casing pressure 25 pounds, td 6096 ft (Gloyd).

PANOLA COUNTY—Danciger O&R Co.'s J. W. Tatum 1, Alfred Bissell sur, spd. R. B. Dearing et al's Wooten Est. 1, Winny Mann sur, sd 2350 ft. Glassell & Glassell's Pierce & Chesbro 1, Julia Soape sur, spd cemtd 16-in csg 922 ft, woc. Magnolia Pet. Co.'s E. A. Hull 2, Thos. Applewhite sur, elev 222 ft, sg & show distillate 5885-5900 ft, setting 9⅝-in csg on bottom to deepen to lower Marine 5948 ft. Socogee Oil Co.'s Trosper 1, Larkin Smith sur, 7-in csg 2400 ft, woc, td 2445 ft.

SHELBY COUNTY—Wm. Redditt et al's Pickering Lbr. Co. 1, Stephen English sur, co to dd, td 2165 ft. H. A. Stebbinger et al's Pickering Lbr. Co. 2, A. Hanson sur, 5 3/16-in csg 5072 ft, swabbed and flowed hot sw at 5126 ft, pb to 5027 ft and arr perf csg and test again, td 5126 ft.

## FLORIDA

LAKE COUNTY—Oil Dev. Co. of Fla.'s Gulf Expl. Co. 2, se se 17-24s-25e, elev 120 ft, attempting to run 6⅝ in csg at 2600 ft, old td 6126 ft.

LEVY COUNTY—Fla. Oil Discovery Co.'s Sholtz 1, sw ne 9-15-13e, rur.

NASSAU COUNTY—St. Marys River Oil


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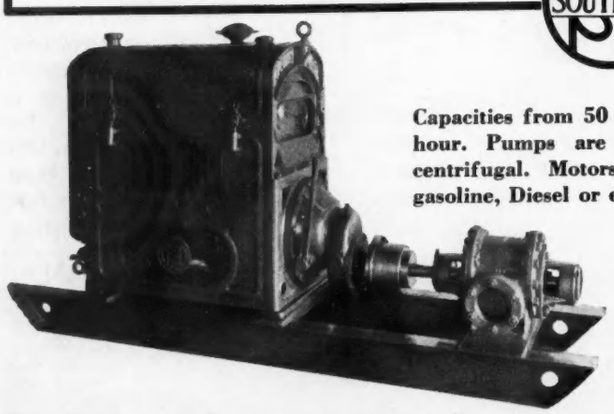

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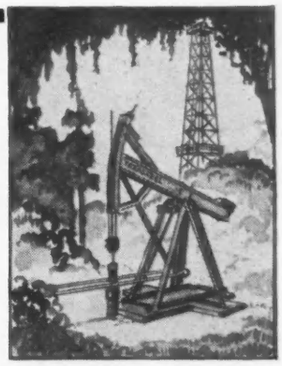

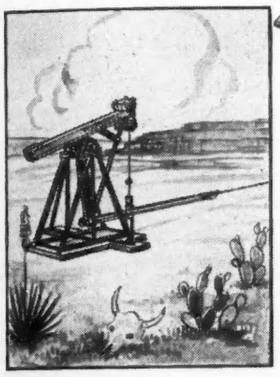

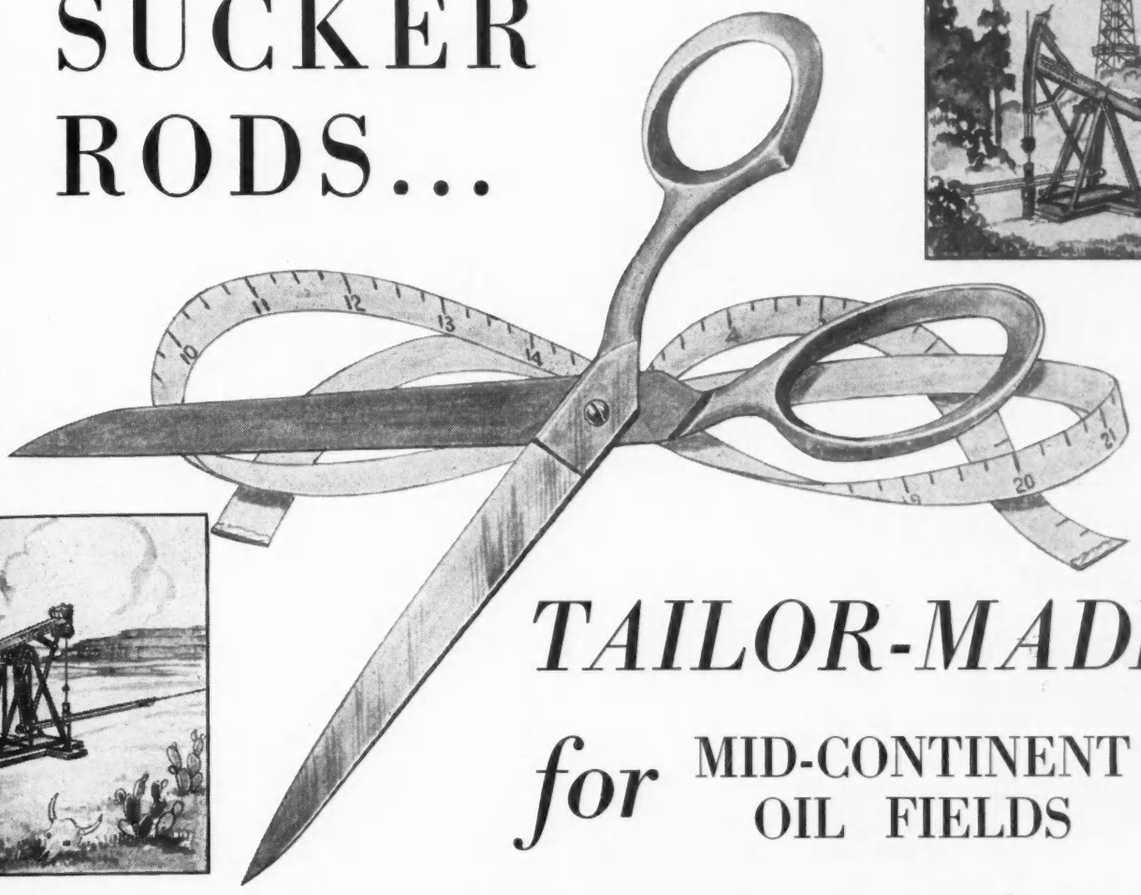

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Corp.'s Hilliard Turpentine Co. 1, nw ne se 19-4n-24e, elev 110 ft, dr (with CT) 1495 ft, hd lime.

POLK COUNTY — Edw. A. Hill's Polk County Lbr. Co. 1, nw nw ne 32-25s-25e, dk.

## MISSISSIPPI

GEORGE COUNTY—Cleve Love et al's J. J. Newman Lbr. Co. 1, c sw 9-1s-8w, rur.

HARRISON COUNTY—G. A. Hessee et al's Hingin 1, c ne 12-7s-10w, elev 69 ft, sd 2332 ft, pyrites and lime.

JONES COUNTY—Snow-Black Pet. Co.'s Cranford 1, s½ nw 29-7n-12w, tested 2 fourbles drilling fluid 3480 ft, coring 4120 ft.

LAMAR COUNTY — Sun Oil Co. et al's Mrs. K. Talley 3, 1600 ft s and 1350 ft e nwc 33-4n-15w, rur.

PIKE COUNTY — Acadian Prod. Corp.'s Bales 1, c se nw 24-7n-2w, dk and mir.

SIMPSON COUNTY—Goodwill O&G Co.'s Berry 1, 33-2n-4e, dk and rog.

YALABOUSHA COUNTY — Skuna Dev. Co.'s Mrs. T. A. Turner 1, se sw ne 26-25n-6e, dk.

## MICHIGAN

GRATIOT COUNTY — Chas. Anderson's Askergrad 1, 9-9n-1w, sd 521 ft. C. E. Bliss' Palmeter 1, 18-9n-1w, sd 1100 ft. Bila Oil Corp.'s Ryan 1, 32-10n-1w, sd 1080 ft. Sam Siegel's Kerr 1, 36-10n-1w, sd 2250 ft. H. B. Cowdrey's DeVuyst 1, 11-10n-2w, rig. Gulf's Lyon 1, 26-9n-2w, dr 1109 ft.

HILLSDALE COUNTY—Jacob Beck's Fee 2, 15-6s-3w, sd 2110 ft. Huges Heimig's Daley 1, 10-7s-4w, fsg 1500 ft.

SAGINAW COUNTY — Mid West Petroleum's Shields 1, ne nw sw, 5-11n-2e, lcn. Darke Brother's Hart 1, ne ne sw 11-11n-3e, lcn. Doran & Hillard's Dobs 1, 33-11n-1e, lcn.

MISCELLANEOUS COUNTIES—Allegan: Champion Dev.'s Sikorosky 1, 9-1n-12w, lcn. Cass: L. T. Barber's Beebe 1, 3-5s-15w, csg 1210 ft. Clare: E&M Oil Co.'s Barney 1, nw nw se, 12-35n-4w, lcn. Gladwin: Dibble Brother's Kimble 1, sw se sw 16-18n-1e, lcn. Ingham: National Mineral's Smith 1, 9-4n-1w, sd 2590 ft. Iosco: Pabst Petroleum's Monfort 1, 8-22n-6e, rig. Isabella: Gulf's Koch 1, 1-13n-4w, test 3600 ft. Missaukee: Rex Oil & Gas Co.'s Meekof 1, 30-21n-6w, sd 3110 ft. Osceola: Osceola Oil Co.'s Gregg 1, 22-18n-7w, lcn. Otsego: Dion Geraldine, Tr.'s Fee 1, 34-30n-3w, lcn.

## SOUTH LOUISIANA

ACADIA PARISH—Humble's Federal Land Bank 1, North Crowley prospect, 34-8n-1e, dr shale 7118 ft.

CALCASIEU PARISH—D. & D. Oil Co.'s Lutcher Moore 1, nw of Starks, 1-8s-13w, to abn 8557 ft.

CAMERON PARISH—Humble's Bell-Hanszen 1, Hanszen prospect, 5-12s-6w, woc 250 ft. Superior & Pure's State Gulf of Mexico 1, in Gulf of Mexico, 4-15s-8w, loc. Union Sulphur's Hebert 1, Big Lake area, 18-12s-8w, completing at 8336 ft.

EAST BATON ROUGE PARISH—Cavalier Oil Co.'s Elliott 1, n of Hope Villa, 3-8s-2e, ru; same operator's Young 1, Port Hudson area, 52-4s-1w, loc.

EAST FELICIANA PARISH—G. C. Koch et al's Andrews 1, Clinton area, 69-2s-3e, dr clay 50 ft.

IBERIA PARISH—Jefferson Lake Oil Co.'s Lake Peigneur 414, Jefferson Island dome, 12s-5e, dr in sdtr hole 5780 ft. Hamil & Smith's Dave Beaz 1, Patoutville area, 35-12s-7e, woc 32 ft.

JEFFERSON DAVIS PARISH—Louisiana Crusaders Oil Co.'s I. Langley 1, Fenton area, 36-7s-5w, coring sand and shale 7617 ft. Stanolind's Calcasieu National Bank 2-B, China prospect, 28-7s-3w, dr sand and shale 5245 ft; same operator's Calcasieu National Bank 2, South Jennings area, 10-10s-3w, dr shale and lime 6558 ft.

LAFOURCHE PARISH — Fohs Oil Co.'s State Long Lake 1, Bourg prospect, 65-17s-19e, dr shale 8399 ft. Gulf's State 3, sw of Marchland, 36-23s-21e, canal.

PLAQUEMINES PARISH — Gulf's State Bay Adams PP, in Bay Adams, 32-19s-28e, dr sand 4530 ft. Tide Water's Manhatten Fruit 3, Venice dome, ru.

ST. BERNARD PARISH—Gulf's Lake Lery 2, Lake Lery prospect, 28-14s-14e, dr shale 6298 ft.

ST. CHARLES PARISH—Amerada & Louisiana Land's State Bayou Des Allemands 1, Black Prince Island prospect, 13-15s-20e, dr shale 3760 ft.

ST. LANDRY PARISH—Gulf's Haas-Hirsch 1, Krotz Springs area, 12-6s-7e, ru. Shell's Boagni 1, ne of Cankton field, 48-8s-4e, dr shale and lime 8485 ft.

ST. MARTIN PARISH—Joe E. Lilly et al's R. Martin 1, Section 28 prospect, 32-10s-7e, woc 992 ft. Texas Co.'s State Mongouloi 3, Lake Mongouloi prospect, 14-10s-9e, dr shale 8179 ft; same operator's St. Martin Land Co. 9, Henderson area, 21-8s-7e, sd waiting on orders, 8000 ft.

ST. MARY PARISH — Texas Co.'s State Bateman Bay 1, Morgan City prospect, 21-16s-12e, washing to bottom 8953 ft; same operator's State Horseshoe Bayou 1, on Horseshoe Bayou, 40-17s-9e, dr shale and lime 12,198 ft.

TERREBONNE PARISH—Humble's Elender 1, Houma Gas field, Section 23-19s-19e testing at 11,615 ft.

## TEXAS GULF COAST

AUSTIN COUNTY—R. L. Hopkins and J. T. McGregor et al's Reineche 1, se of Bellville, J. Stephenson sur, abn 5008 ft. Temple Hargrove & Cockburn's Foster 1, New Ulm area, J. Bell sur, dr shale 3381 ft.

BRAZORIA COUNTY — Pure's Slade 1, Peach Point prospect, S. F. Austin sur, abst 20, fsh 7842 ft.

COLORADO COUNTY—Humble's Relaw Land Co. 1, Eagle Lake area, J. L. Dugat sur, dr shale 1659 ft.

HARRIS COUNTY—H. J. De Arman et al's Tyrell & Garth 1, Cedar Bayou prospect, L. Heminway sur, coring shale 6275 ft. Stanolind's Oates 1, Clinton area, C. Martinez sur, preparing to test at 8088 ft. Superior's Butler 1, Bammel area, J. Ehrhardt sur, dr shale 5380 ft. Texas Gulf's Gillespie 1, Aldine area, S. Contreras sur, sd 7100 ft.

JEFFERSON COUNTY—Magnolia's Phelan 1, sw of Amelia, Cheek area, S. Stivers sur, coring shale 8529 ft.

LIBERTY COUNTY—Jack Frazier's Hanchey 1, Hardin area, H. B. Johnston sur, ru.

MATAGORDA COUNTY — Continental's Hawkins 2, Sheppards Mott area, D. McCarthy sur, dr shale 691 ft. Sun's Craig 2, Hawkinsville area, J. Williams sur, mixing mud 5869 ft. United North & South Dev. Co.'s (Receivers) C. O. Stoddard 1, sw of Buckeye, M. Cotton sur, testing at 9840 ft.

WALLER COUNTY—Stanolind's Hargrove 1, Katy area, T. S. Reese sur, running an electrical logging device at 7500 ft.

WHARTON COUNTY—Sam G. Harrison's Harfast 1, n of Louise, L. Conkrite sur, coring shale 4509 ft.

### Seismograph Reflection Work

Seismograph Service Corporation, Tulsa, Oklahoma, has ready for distribution an interesting booklet describing its reflection seismograph service.

### Recording Instruments

American Schaeffer and Budenberg Division, Consolidated Ashcroft Hancock Company, Bridgeport, Conn., has ready for free distribution a catalog covering its American Wide Range, non-indicating controllers.

### Cutting Tools

Haynes Stellite Company, Kokomo, Indiana, recently issued an attractive booklet describing its "J-Metal" cutting tools.


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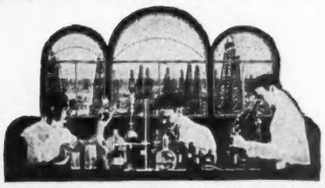

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## *Stocks too high*

[*Continued from page 10*]

prize for working things out with only three variables."

Hardwicke made it clear that he was not now advocating a change in the spacing or the method of allocation in East Texas or in any other field completely developed. His purpose, he said, was to discuss the proposed method so as best to set a pattern for development of new fields.

Yates operators pointed out that the allowable for that field has been reduced 72 percent during the past few years, while the consumer demand for Texas oil has mounted from 700,000 barrels per day to 1,400,000 barrels a day. They recalled that the commission at one time had prorated Van and Conroe on a parity with Yates, but declared that this parity had long since been abandoned and that Yates was now permitted to produce 13,000 barrels daily less than allowed in the Conroe field.

### East Texas Pressure

A decline of 2.85 pounds in the average bottom-hole pressure for the East Texas field from April 12 to May 13 was reported by V. E. Cottingham, director of production for the commission. He said that the average pressure on May 13 was 1,164.76 pounds and that during the last pressure period the decline had been at the rate of .207 pounds per million barrels of oil produced. During this time the commission had allowed production of 13,789,483 barrels, a daily average of 459,649 barrels.

Cottingham pointed out that this decline per million barrels produced was less than the average for the past three years and that for this reason he did not believe that any further reduction in the East Texas allowable should be ordered for June. If his recommendation is followed, the allowable would remain at 2.32 percent of the hourly potential of all the wells in the field.

Barnsdall Oil Company requested that the commission increase the allowable per well in the Placedo field, Victoria County, and the Flour Bluff field in Nueces County.

An increase in the allowable for the Hastings field was requested by Stanolind Oil & Gas Company. The current allowable is 14,360 barrels daily, and C. G. Condra, attorney for the company, said that allowable assigned to 10 new wells to be completed by June 1 would bring the total to 15,200 barrels daily at that time.

A request that there be no reduction in the allowable for the Talco field was filed by Talco Pipe Line Company. This company is now constructing a refinery at Mount Pleasant, Texas, and is attempting to develop a working stock of 250,000 barrels before the plant is completed in June. Senator Tom DeBerry said that the company had 129,000 barrels on hand on May 1, but that during the past two months, withdrawals had exceeded runs to storage by 35,000 barrels.

Plans to revise the method of allocation in the Henderson field, Winkler, County, were opposed by 90 percent of the operators. The wells are now allowed 66.5 barrels each, and the plan proposed would fix allowable on the basis of acreage and potential.


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# This Week with the Industry's EQUIPMENT SUPPLIERS

## American Sand-Banum Moves To Rockefeller Center

American Sand-Banum Company announces removal to new and larger offices at 9 Rockefeller Plaza, Rockefeller Center, New York. This is one of the newer units in Rockefeller Center and the company has been awaiting its completion before giving up its old offices at 342 Madison Avenue.

## Johnson Returns to Homestead Valve Manufacturing Company

Homestead Valve Manufacturing Company announces the return of Elliott G. Johnson to take over his old duties as advertising manager, after a four-year leave of absence, during which, he was serving as ordnance engineer with the Navy.

A background of mechanical engineering received at Carnegie Institute of Technology, and early training at Westinghouse Electric and Manufacturing Company, prepared Johnson for his work in the industrial advertising field. He previously served Homestead Valve Manufacturing Company as advertising manager and is a past president of the Industrial Advertising Council of Pittsburgh.

## Meister General Manager Hyatt Bearing Division

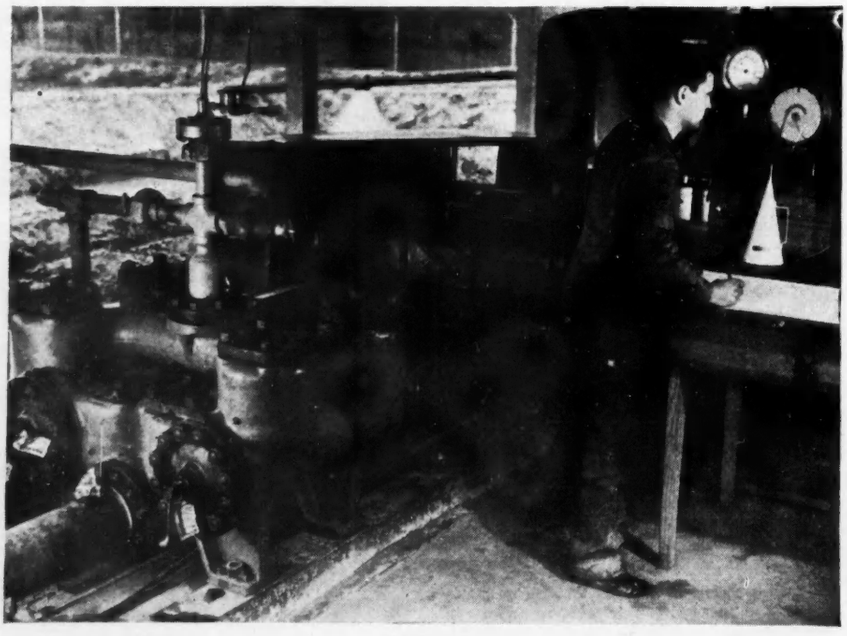
William S. Knudsen, president of General Motors Corporation, announced the appointment on May 7 of H. O. K. Meister as general manager of the Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.

He has been employed in various capacities in the Hyatt Division since 1914.

**JACK GRIZZEL**
**Transferred to Casper, Wyoming, for Byron Jackson Company.**

In that year he joined Hyatt Roller Bearing Company as assistant advertising manager in Harrison. Later he was transferred to Chicago in the sales department of the Hyatt Tractor and Implement Bearings Division and in 1920 became sales manager of that unit. In 1925 he returned to Harrison as general sales manager and in 1929 was named assistant general manager.

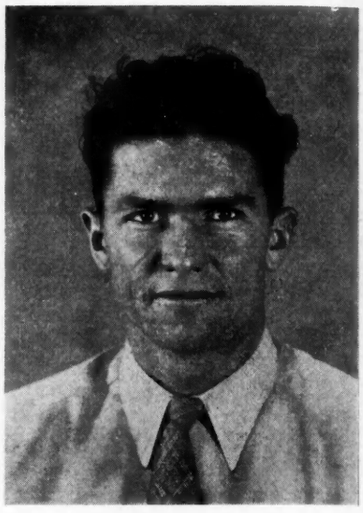
Meister was born in Milwaukee 49 years ago, educated in the Milwaukee public schools and studied in the extension department of the University of Wisconsin.



**Mission Manufacturing Company's equipment includes a recent addition for testing pump parts.**

## Byron Jackson Makes Personnel Changes

Byron Jackson Company, Los Angeles, announces transfer of Jack Grizzle as sales representative in the Rocky Mountain area. He will have headquarters at 345 S. Park Street, Casper, Wyoming, and will cover all Rocky Mountain area fields, including periodic trips to Canada.



**CARTH NICHOLSON**
**Byron Jackson Company representative at New Iberia, Louisiana.**

Carth Nicholson has been added to the sales force of the Oil Tool Division to cover Southern Louisiana with headquarters at 213 West Main Street, New Iberia, Louisiana.

## Mission Has New Testing Department for Pump Parts

Mission Manufacturing Company, Houston, announces an addition of a complete department for experimental work on and testing of new designs of valves, pistons, and other parts for high-pressure slush pumps.

Suggested improvements in design and metallurgy are test-run under actual operating conditions in a new, modern high-pressure pump until they break down. Thus every improvement in change and design will be made to prove itself in continuous performance. All preliminary experimenting is done in this new department ahead of field testing.

The department is completely equipped with machines and tools, among which are: a high-pressure slush pump, a prime-mover power unit, and several extremely accurate measuring and recording instruments. It is fully manned and operates 24 hours a day. The pump is located near the plant to facilitate close correlation between testing and manufacturing operations.

## Slonneger Assistant Chief Engineer The Continental Supply Company

Appointment of J. C. Slonneger to the position of assistant chief engineer of The Continental Supply Company, Dallas, effective April 1, marks the culmination of a long, successful engineering career that began with Caterpillar Tractor Company almost a quarter of a century ago.

Slonneger's experience includes six

**JOHN C. SLONNEGER**
**Joins The Continental Supply Company's engineering staff.**

years as supervisor of engineering in the field for Falk Corporation, Milwaukee, Wisconsin. Prior to that, he headed the research engineering department of International Harvester Company at Milwaukee for seven years.

Many technical articles and engineering papers authored by Slonneger and published in trade journals have been widely read in oil circles. He also has a number of industrial inventions to his credit, among which the Emsco-Slonneger type counterbalance for oil field pumping units is the most widely known.

Asked about his oil field engineering experience as compared to other industrial lines in which he has been active for so many years, he answered: "I find oil field engineering problems varied and extremely fascinating. Engineering practice in the oil industry is still in its infancy, and I expect to enjoy many years of continued work in this most absorbing field."

## Link-Belt Transfers Red Penick to Houston

Stuart T. (Red) Penick, who has been with Link-Belt Company for the past two years in an engineering capacity, was transferred to the Houston office May 13, where he will devote his time to engineering development work for the company, under the direction of Pete Wallace, oil country division manager.

Penick was graduated from the University of Texas school of mechanical engineering in June, 1935, and joined the engineering staff of Link-Belt Company immediately thereafter. In order to become thoroughly acquainted with the company's equipment and its application he has spent the past two years in the Ewart Works at Indianapolis, the Dodge Works and the plant at Philadelphia.

## Charles N. Hough in New Tulsa Quarters

Charles N. Hough Manufacturing Company recently secured a new warehouse and office for its Mid-Continent division at 1-5 North Frankfort, Tulsa.

The following salesmen are located in the Mid-Continent territory: C. O. Shumaker, Kansas; Frank L. Scott, Oklahoma; A. M. Mallinson, North Texas; G. A. Alviset, Gulf Coast and Ed Ross, East Texas, North Louisiana, and Arkansas.

## Wickwire Spencer Steel Company Is Reorganized

After concluding one of the longest industrial receiverships on record, Wickwire Spencer Steel Company, announces dissolution of the trusteeship under which it has been operating and the formation of a new company under the same name.

In October, 1927, E. C. Bowers and C. L. Feldman were appointed receivers of Wickwire Spencer Steel Company which had been formed in 1920 by the combination of Wickwire Steel Company of Buffalo, New York, and Clinton-Wright Wire Company of Worcester, Massachusetts. After continuing for seven years, the receivership was changed to a trusteeship on July 31, 1934, and the company reorganized on May 1 of this year.

Officers of the new company are E. C. Bowers, president; P. M. Macklin, executive vice-president; R. L. Foster, vice-president and general sales manager; and George H. Creveling, secretary and treasurer.

American Wire Fabrics Corporation, large manufacturer of insect screen cloth, and Wickwire Spencer Sales Corporation continue as subsidiaries, and all branch offices and warehouses continue as in the past at New York City, Buffalo, Chicago, San Francisco, Worcester, Los Angeles, Portland, Seattle, Philadelphia, Chattanooga, Tulsa.

**STUART T. PENICK**
**Transferred to Link-Belt office at Houston.**

## S. B. Robertson Elected President B. F. Goodrich Company

Samuel B. Robertson was recently elected president of The B. F. Goodrich Company, to succeed James D. Tew, who announced his retirement from active business May 3 after 31 years with the rubber company.

Robertson was born in Milton, Mass., in 1878 and was graduated from Massachusetts Institute of Technology in 1899. After a period as railroad division engineer, he was promoted to the post of superintendent in the Pennsylvania Railroad system, later becoming general superintendent for the central system of the Pennsylvania lines. He joined B. F. Goodrich Company in 1919 and soon became the company's director of engineering. In 1928, following the construction of the company's plant in Los Angeles, which he supervised, he was elected vice president and general manager there, continuing in that capacity until September 9, 1931, when he returned to Akron as vice president and general manager of the tire division. He was elected a director of the company in February, 1937 and made executive vice president at the same time.

Robertson is also a director of Goodrich Silvertown Stores, Miller Rubber Company, Inc., and The B. F. Goodrich Rubber Company of Canada, Ltd.

**New supply store opened by Murray-Brooks, Oil Field Supplies, to serve the Evangeline field, near Jennings, Louisiana.**

# HUMBLE THREDKOTE

(Reg. U. S. Pat. Off.)

# Handy to have around

**Every day on every job you will find many uses for Humble Thredkote. Steam lines, casing, mud lines, water lines, tool joints, all need Humble Thredkote. Because Humble Thredkote gives *three point service* to all threaded connections: It *lubricates* the threads; it *seals* the joint; it *prevents* rusting. Humble Thredkote is handy to have around—order a can from your local Humble Bulk Agent or write direct to**

**HUMBLE OIL & REFINING COMPANY**

HOUSTON, TEXAS

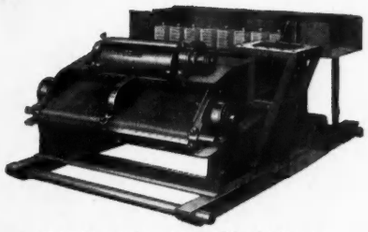
HUMBLE

**Humble Thredkote No. 1, zinc filled for high pressure connections. Humble Thredkote No. 2, graphite filled, for low pressure connections and steam lines.**

# NEW PRODUCTS FOR THE FIELD
## Machinery • Tools • Catalogs • Books

### MUD SCREEN
**Vernon Tool Company, Ltd.**

Vernon Tool Company, Ltd., Los Angeles, announces a new and improved McNeely Vibrating Mud Screen, known as Model E. Features of this screen include super-strength for rough service; completely unitized design for easy handling in the field, and a curved screen surface (exclusive) which increases capacity and lengthens screen life.

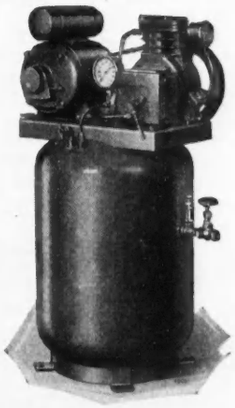


**McNeely Vibrating Mud Screen.**

According to the manufacturer, the new screen has an average capacity of 650 gallons of drilling fluid per minute. Vibrating frame and screen cloth are divided into two sections—thus only one half the cloth need be replaced at one time. Each half is independently tensioned and new cloth is easily installed and stretched taut.

### COMPRESSOR
**Ingersoll-Rand Company**

Ingersoll-Rand Company, Phillipsburg, N. J., has announced a new line of fractional horsepower air compressors. These units are made in ¼ and ½ horsepower sizes and are very compact and neat in appearance. They have automatic start and stop control, are equipped with a new style seamless steel tank, and an improved check valve.



**Ingersoll-Rand Compressor.**

When furnished for single-phase current they are equipped with a brushless capacitor type motor and a built-in automatic protection switch giving over-load and under-voltage protection. They are rated for 150 pounds per square inch maximum pressure, but may be set for lower pressures, or may be equipped with a reducing valve for still lower pressures.

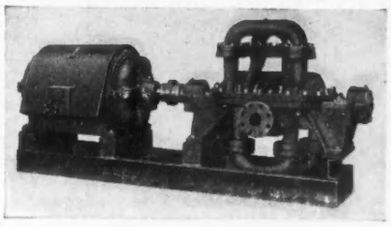
The ¼ and ½ horsepower units are available on a 2.4 cubic foot tank. This unit is less than 35 inches high. The ½ horsepower size is also available on a 4.6 cubic foot tank in either vertical or horizontal mounting. If desired the units can be furnished less the tank.

### BOILER-FEED PUMPS
**Worthington Pump & Machinery Corporation**

Worthington Pump and Machinery Corporation, Harrison, New Jersey, announces a new line of multi-stage centrifugal boiler-feed pumps, for pressures to 1200 pounds per square inch.

Axial hydraulic balance and equalized radial thrusts are claimed by the manufacturer to make these pumps among the most perfectly balanced on the market. An even number of impellers, facing in opposite directions, serve to equalize the axial forces and eliminate balancing drums or discs. In addition, large thrust bearings insure long life and reduce maintenance costs.

The staggered volute construction effects radial hydraulic balance, reducing wear on internal clearances and eliminating stuffing box troubles.



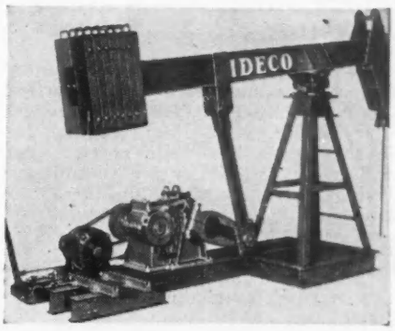
**Worthington Boiler-Feed Pump.**

Other physical improvements are exceptional accessibility, an external inter-stage loop, a casing shaped to prevent erosion and eddy currents, and heavy-duty oil-lubricated ball bearings mounted in dirt-proof housings. The horizontally-split casing, with suction and discharge nozzles in the lower half, permits the pump to be taken apart readily for inspection or repair.

The pumps are made in 4-, 6- and 8-inch sizes for a speed range from 2500 to 4000 r.p.m. Capacities range from 200 to 1500 gallons per minute and pressures up to 1200 pounds.

### PUMPING MACHINE
**International Derrick & Equipment Company**

International Derrick & Equipment Company, Columbus, Ohio, has announced the addition of a small unit to its line of geared pumping machines. This new machine has a capacity of 11 horsepower at 20 revolutions per minute (proposed A.P.I. nominal rating) and a peak torque rating of 54,400 inch-pounds. The gear box is equipped with double reduction gears having an overall ratio of 31 to 1. The crank shaft is 4½ inches in diameter and is mounted in bronze bearings. The intermediate and high speed shafts are mounted in roller bearings. The gears are of continuous-tooth herringbone construction,




**Ideco Pumping Machine.**

cut on Sykes gear generators.

This machine is available in either single crank or twin crank construction. It may be furnished as a self-contained unit in which the gear box, samson post and prime mover are mounted on skids, or it may be furnished less skids in which case the prime mover, gear box and samson post are mounted directly upon concrete piers. This machine is designed for the application of either beam counterweights or rotary counterbalance.

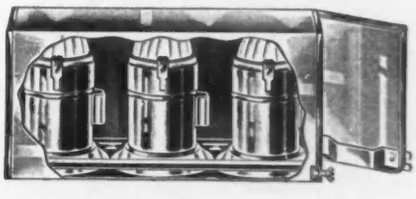
The center iron bearings and the upper and lower pitman bearings are unusually heavy. The lower pitman bearing is equipped with Timken roller bearings and is completely sealed to retain the lubrication and to exclude water and dust. The upper pitman bearing is bronze bushed and completely sealed. It is lubricated by means of wick oilers which deliver the lubricant to the top of the trunnion. The lubricant circulates around the journal and collects in a reservoir under the bearing. The center iron bearing is babbitt-lined and is also equipped with wick oiling lubricating means similar in construction to that used in the upper pitman bearing.

This machine has a maximum pumping stroke of 42 inches. A mule head assures straight line motion at the polished rod. The mule head is of hinged construction which permits it to be swung upward and laid back on top of the walking beam during servicing operations.

### ELECTRIC TRUCK FLARE
**Economy Electric Lantern Company**

Economy Electric Lantern Company, Inc., Chicago, is manufacturing a new approved electric flare which has the long life of service (60 to 80 hours) needed by truck and bus fleets. It is visible at a half-mile under normal conditions.

To assist in keeping the flares from



**Economy Electric Flare.**

rattling or breaking, the company supplies a metal container, providing protection against such annoyances and dangers, with the purchase of each set of three.

Flashing types are also available.

## STEAM DRILLING ENGINE

**Gardner-Denver Company**

Gardner-Denver Company, Quincy, Illinois, has announced a new vertical twin-cylinder steam drilling engine for rotary drilling and other oil field use. These engines are made in two sizes 8 x 8 and 9½ x 8. They are suitable for driving the rotary table directly, at the same time having sufficient power to serve as a stand-by for driving the draw works. The engine is also suitable for driving a mud pump, by means of "V" belts, flat belt or chain drive.

The engine is reversible and is of the adjustable cut-off type. Cut-off is adjusted manually and is easily set to meet load requirements. Steam valves are of the inside admission piston valve type; light, perfectly balanced and easy to reverse. The valves are tight under high pressures and with superheated steam. The steam cylinders are insulated with mineral wool which is covered by sheet steel.

Each end of each cylinder is equipped with an automatic dump valve. These valves protect the engine against damage by automatically relieving the cylinders of accumulated water.

All moving parts are enclosed, and are flood lubricated by means of a combination splash and pump system. In addition to the oil splashed on the moving parts by the crankshaft counterweights, a rotary oil pump furnishes additional lubricant to the crossheads and pins, crosshead guides and crank pins. Steam cylinders and steam valves are lubricated by a mechanical force-feed lubricator.

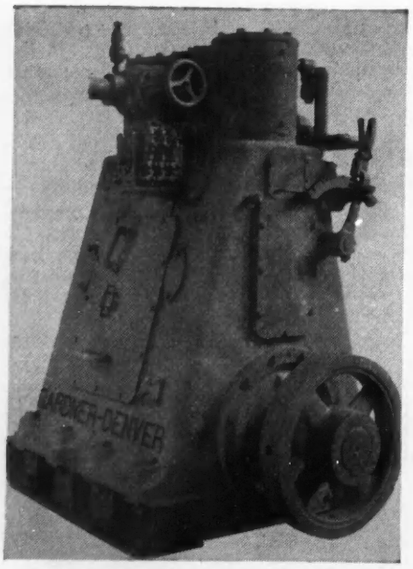
The forged steel crankshaft is of the two throw center crank type with cranks at 90°. Shaft is supported by two double row Timken tapered roller bearings. Shaft projects beyond each side of the frame; drive may be taken from either side.

Connecting rods are of the marine type with ribbon type steel backed babbitt lined crankpin bearings, and bronze bushings for crosshead pins.

Crossheads are of alloy cast steel, fitted top and bottom with lead-bronze shoes which are adjustable by means of shims.

Piston rod stuffing boxes are fitted with metallic packing of the floating ring type which prevents steam leakage and reduces rod wear to the minimum.

Oil stop heads are fitted with metallic packing to prevent leakage of lubricating oil from the crankcase. Provision is made to keep condensate from steam cylinders out of the crankcase.




**Gardner-Denver Steam Drilling Engine.**

## ROD STRIPPER

**The Guiberson Corporation**

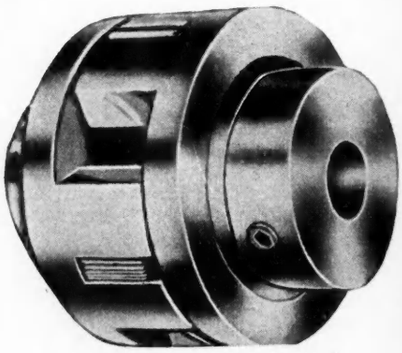
A new sucker rod stripper has recently been placed on the market by The Guiberson Corporation, Dallas, Texas. Purpose of this tool is to strip the oil and paraffin from the sucker rods and couplings and to prevent the escape of gas and oil when the rods are being run in or out of the well.

**Guiberson Sucker Rod Stripper.**

The tool provides a leak-proof seal under pressure. It is rated at 400 pounds working pressure and sucker rods have successfully been pulled without loss of oil or gas under pressures exceeding 400 pounds. This makes it possible to remove safely and easily the sucker rods from a well that has started flowing after being brought in on the pump or a well with a large amount of gas that has a tendency to build up heads and flow intermittently. The rubbers providing the pack-off are extremely flexible and if necessary will allow the passage without leakage of any pump, pump plunger, or sucker rod splicers that can be run in 2½-inch tubing.

The device consists of but four parts and it is pointed out that there are no pins, bolts or other small pieces which can easily cause trouble. The rubber is made in two halves and is inserted in the housing. A compression plate goes over the rubbers inside the housing; the cover plate screws onto the housing by means of a coarse thread and compresses the rubber, sealing it around the rod as well as the inside of the housing. The cover plate is provided with holes into which a bar or chain tong handle may be inserted to facilitate screwing it down on the housing.

The face of the rubber contacting the sucker rod as well as the outside of the rubber which contacts the housing is deeply fluted horizontally, or circumferentially, which gives it the wide range of expansion and contraction necessary. Two sizes of rubbers are available. One size is for ½-, 9/16- or ⅝-inch rods, the other for ¾-, ⅞- or 1-inch. The housing is provided with a female 2½-inch A.P.I. plain tubing thread. If the well tubing is of a different size, it may easily be subbed by the use of a swedged nipple.



**Waldron Flexible Coupling.**

## FLEXIBLE COUPLING

**The John Waldron Corporation**

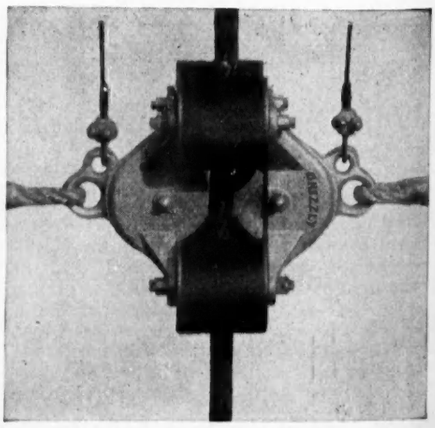
The John Waldron Corporation of New Brunswick, New Jersey, have announced a new Francke all-steel fractional horsepower flexible coupling for fans, fuel pumps, generators, etc., up to ¾ horsepower at 1800 RPM and for shafts up to ¾-inch diameter.

According to the manufacturer these new couplings provide free and independent lateral floating of the connected shafts, accurate alignment surface, an assembled one-piece all-steel center member, large load-carrying surfaces, large misalignment capacity, are torsionally resilient, mechanically flexible and silent at any speed. Machines can be separated without touching coupling.

## LINE SAVER

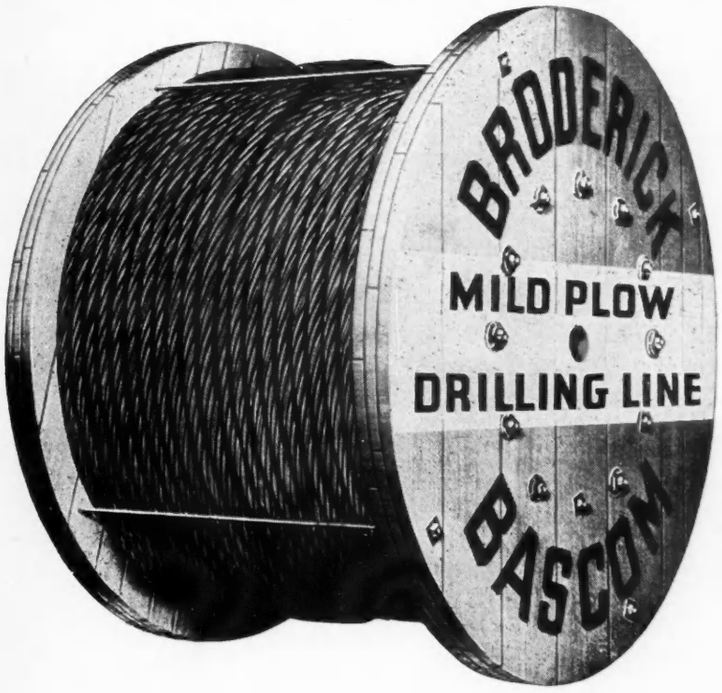
**E. M. Smith Company**

E. M. Smith Company, Los Angeles, has recently introduced the Grizzly "No-Wip" Line Saver designed to eliminate excessive line wear. In passing through this device, the wire line comes in contact only with six rubber rollers, which take out the whip and help spool the line. There is not any friction, stress or strain on the line, as the device floats with the line and the rollers spin freely, due to two bearings in each roller. This freedom of operation eliminates many line diffi-



**"No Whip" Line Saver.**

# Our Experience Saves You Money




Away back when most drilling lines were manila, Broderick & Bascom pioneered in the manufacture and sale of high quality wire drilling lines.

The Broderick & Bascom Mild Plow Steel Drilling Lines you get today embody all the knowledge of drilling conditions, and how best to meet them, that have been gathered through all these years.

They are live lines with the elasticity necessary to stand the gruelling shocks of cable tool drilling. They stand abrasion, too—and save you money by giving unusually good service.

Profit by our long experience. Put on a B & B Mild Plow Steel Line and watch it pile up savings for you.

## Broderick & Bascom Rope Company

**St. Louis**

Factories: St. Louis, Seattle and Peoria
Houston Branch: 1311 Palmer St., Houston, Texas

## The Continental Supply Co.

**Mid-Continent and Rocky Mountain Distributors**

T-11 R1

culties as it can not whip or pile up on the drum and is forced to track properly. The rollers are made of tough oil-resisting rubber compound and are practically wear proof. The device can be installed at any point in the derrick, at any height over the drum and functions perfectly at any angle.

## FUEL DEHYDRATOR

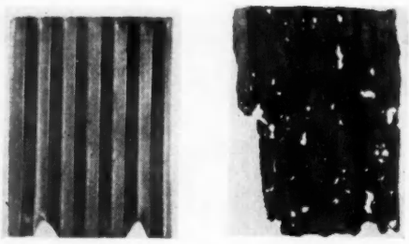
**The Cunningham Company**

The Cunningham Company, Los Angeles, California, is marketing an interesting item of equipment for Diesel engines that neutralizes the acid in fuels and at the same time makes harmless any moisture carried in suspension. While the percentage of both acid and water in fuel oils is small, they have, nevertheless, been responsible for much damage to delicately machined parts of Diesel engine injection systems.

The illustration shows a new plate contrasted to a plate that had approximately 35,000 gallons of fuel oil passed over it. The new one, which is one of five elements in the Cunningham fuel dehydrator, weighs 2 pounds 4 ounces—whereas the plate removed had been eaten away until it weighed but 10 ounces.

"The theory upon which this unit operates," says an announcement, "is that the acid and moisture in fuel oil when coming in contact with the plates contained in the insulated steel case, set up a battery action. In eating away the special alloy plates the acid neutralizes and dissipates itself and the water apparently dries itself during this action. What remains of the water settles to the bottom of the container from which it can be drained.

"A rather unusual and secondary result from the elimination of acid and water in fuel, in Diesel engine service, is the improvement in the quality of the lubricating oil. Most crankcase oils



**Before** **After**

are subject to dilution by fuel oil passing the rings which causes the oil to sludge up. It has been found that on engines equipped with dehydrators that the lube oil more nearly retains its original viscosity between changes. This is attributed to the more complete combustion of the fuel oil because it has had the acid and water removed from it."

## MOTOR STARTER

**Allis-Chalmers Manufacturing Company**

Allis-Chalmers Manufacturing Company, Boston, Massachusetts, announces a new type of across-the-line air motor-starter, equipped with "Ruptors," known as type AP-7. The "Ruptors" are enclosing chambers which confine and depotentiate the arc formed by circuit interruption. There "arc-depotentiating chambers" greatly increase the interrupting ability of the contacts, and form an isolating barrier between contacts of opposite polarity. Other features include: vertical make and break—silent operation; enclosed temperature overload relays, affording positive motor protection; unit construction—pole units consisting of individual molded bases mounted on a steel chassis. thus assuring true contact alignment; large silver double break contacts—no contact dressing needed; contacts accessible and quickly renewable; pilot circuit isolated from motor circuit, permitting a separate control voltage for push-button circuit where necessary; motor starter unit arranged for flat surface mounting when applied without enclosure.

The starter is furnished for 7½ horsepower at 440 and 550 volts, 5 horsepower at 220 volts and 3 horsepower at 110 volts.

## SLUSH PUMP GAUGE

**Martin-Decker Corporation**

Martin-Decker Corporation, Long Beach, California, has announced a new slush pump gauge with a range high enough to cover those infrequent peaks encountered in drilling, such as cementing, breaking circulation, etc., and yet the pressure gradations are sufficiently spaced to allow accurate reading of the ordinary low pump pressures encountered in every day drilling.

**Martin-Decker Slush Pump Gauge.**

Through an ingenious arrangement in the pressure element, the first 1,500 pounds pressure is spread over 240 degrees of dial circumference, allowing easy and accurate vernier readings on all low-pressure work, and quickly shows the small pressure variations that occur when tool joints, connections, or fluid passages in the bit pump out. The last 1,500 pounds are condensed on only 60 degrees of dial circumference, or one fourth the spread of the first 1,500 pounds, and thus permit reading of peak pressures up to 3,000 pounds with complete safety.

This new type mud gauge is available in a streamlined case that is recessed for the mounting bolts and provides a smooth exterior surface without projections to catch the clothing. This element is also available to replace the regular mud gauge element in the company's older instruments and it can be readily installed without the need of special tools.

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**THOMAS GILCREASE,** president Gilcrease Oil Corporation, Tulsa, has moved his entire office to San Antonio and has located at 2000 Milam Building. Among other officials moving are G. B. Bancroft, vice president, and Mrs. C. H. Steel, secretary and treasurer. The company has production in Zapata, Jim Wells and Nueces Counties, as well as other parts of Texas.


**JUST OFF THE PRESS**

PETROGRAPHIC AND PHYSICAL CHARACTERISTICS OF SANDS FROM SEVEN GULF COAST PRODUCING HORIZONS,

By M. T. HALBOUTY, B.S., M.S.,

Chief Geologist, Glenn H. McCarthy, Inc.

The material printed in this book was first published in The OIL WEEKLY in a number of installments, extending over a seven-week period. Because of the widespread interest and demand for copies, it is being presented in book form for the benefit of those who may wish to study or continue the research work of M. T. Halbouty, the author.

Size 5½" x 8¼" — Fabrikoid Binding

126 pages illustrated. Price $1.50

Send check to

THE GULF PUBLISHING COMPANY

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# CATALOGS...BULLETINS

## *Helpful Publications Which Manufacturers Will Be Glad to Send Free for the Asking*

### Engine Driven Welders

Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pennsylvania, has issued descriptive bulletins 26-150 describing Westinghouse engine-driven welders, single operator, 200-300-400 amperes sets including performance curves of welder, fuel consumption curves of the engines and general descriptions of the welders and power units.

### Measuring Line Weight Indicator

Martin-Decker Corporation, Long Beach, California, is distributing a bulletin describing a new Measuring Line Weight Indicator. Built of government specification navy bronze this instrument is said to offer the latest advancements in weight indicator design. Light, compact, easy to regulate it is manufactured to meet the present day requirements for accuracy, flexibility, sensitivity and strength.

### Double Disc Gate Valves

M & H Valve & Fittings Company, Anniston, Alabama, has issued a pamphlet, No. 32, describing in detail the M & H Red Wheel Line of double disc parallel seat gate valves in standard and extra-heavy weights for oil field and refinery hydrostatic pressure of 400 pounds per square inch and the extra-heavy valves to 800 pounds use. The standard-weight valves are tested to a per square inch.

### Reflection Seismic Survey Bulletin

Seismograph Service Corporation, Tulsa, has recently published an interesting brochure containing pertinent facts relative to reflection seismic surveys. Principals and general contracting methods and procedure are described in detail and the booklet is pictorially replete with domestic and foreign field views of actual jobs.

### Oil Circuit Breakers

Westinghouse Electric and Manufacturing Company, dept. 5-N, East Pittsburgh, Pa., has issued Folder No. 33-226, describing construction, operation and applications of type F-124 indoor oil circuit breakers for industrial and central station use.

### Refractory Block Insulation

Quigley Company, 56 West Forty-fifth Street, New York, has issued Bulletin No. 326, describing its light-weight low heat storage refractory block insulation, with service temperature 2200° F.; Bulletin No. 281-B, describing its triple-A No. 20, heavy-duty block protective coating for iron, steel and cement.

### Microscopes

Bausch & Lomb Optical Company, Rochester, N. Y., has issued Catalog No. D-185, describing its laboratory microscopes, type-H, and general mechanical features.

### Lighting

A catalog describing many types of industrial lighting equipment for use with 200- and 400-watt high-intensity mercury vapor lamps has been published by Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa. Combination mercury-incandescent units are also described. Included in the catalog is information on designing an installation, choosing mounting heights, spacing and size of units for different wall and ceiling conditions, and average resultant lighting intensity. Vapor proof units for severe service conditions are included.

### Pipe Line Equipment

All Steel Products Manufacturing Company, Wichita, Kansas, has issued a bulletin describing its latest pipe line equipment. Particular attention is called to their new Model PC, which is designed within the 8-foot road limit and is light enough for fast transportation usually required for maintenance work. The Model V Backfiller is a combination unit designed for taking up and relaying lines as well as lowering in loops ahead of back filling. Other types and models of pipe line construction equipment are also described in this folder.

### Seismograph

An illustrated booklet containing pertinent facts covering reflection seismic surveys and dealing with general contracting methods and procedure is being distributed by Seismograph Service Corporation, Tulsa.

### Mud Screen

Descriptive literature describing the new W K M mud screen has been prepared and is being distributed by W K M Company, Houston.

### Equipment Catalog

Copies of a new Rector Well Equipment Catalog describing its various types of equipment is being distributed by Rector Well Equipment Company, Fort Worth, Texas.

### Wire Rope

The Wickwire Spencer Steel Company, 41 E 42nd St., New York, is distributing complimentary copies of a new wire rope handbook entitled "Know Your Ropes" to the oil industry. This interesting booklet contains 80 pages devoted to the subject of how to obtain longer wire rope service through the proper selection and care of the rope while in service.

### Rubber Specialties

United States Rubber Company has released a new catalog entitled "U. S. Rubber Specialties for Oil Well Rotary Drilling." This booklet covers the company's line of mechanical rubber goods for the oil well rotary drilling and describes U. S. Rotary and other hose, V-belting and the new U. S. Rubber Company time-saving plan of ordering rotary packings.

### Wire Rope

American Cable Division of American Chain & Cable Company, Inc., Wilkesbarre, Pa., has recently published a booklet entitled "Safety With Wire Ropes" that contains considerable constructive information covering the care, maintenance and construction of wire rope.

### Measuring Line Weight Indicator

Martin-Decker Corporation, Long Beach, California, has published a leaflet describing and illustrating typical uses of its Measuring Line Weight Indicator. The device shows the tension in measuring lines even while they are in rapid motion. To those who run instruments in wells for bottom-hole pressure tests, directional surveys, locating plugs during cementing, etc., it gives a continuous reading on the line strain.

### Recording Gauges

Several new bulletins on recording and controlling gauges have just been published by The Bristol Company, Waterbury, Conn. These are bulletins Nos. 483, 484, 485 and 486.

### Pipe Welding

The Bastian Blessing Company, Chicago, recently published a 12-page folder, No. R-140, as a supplement to the Oxy-Acetylene Welders Handbook. It is profusely illustrated and contains much information of value to the oil industry.

### Firing Control

Maintenance Engineering Corporation, Houston, has published a folder describing in detail its "Meco" unitized firing control for oil field boilers. It is claimed that where gas is used for fuel this control will maintain constant steam pressure in the boilers, even with varying steam requirements and gas supply pressure, the gas being fed to the boilers automatically in accordance with the steam demand. Correct draft is also maintained by controlling steam flow to jets installed in boiler stacks. Savings in fuel and water with increased boiler capacity and longer life of the boiler are said to be obtained through use of this equipment.

### Wrenches

J. H. Williams & Co., 75 Spring Street, New York, Booklet No. A-409 illustrates and describes its full line of "Supersocket" wrenches, with detachable sockets. Booklet No. A-81, describes the full drop-forged carbon steel wrench line.

### Centrifugal Pumps

Worthington Pump and Machinery Corporation, Harrison, N.J., has issued Bulletin No. W-318-B7A, describing its new Balanced Multi-Stage Volute Centrifugal Pumps, Type UX, for boiler feed service.

### Rock Bits

Hughes Tool Company, Houston, is releasing an instructive bulletin on the performance, maintenance and selection of rock bits for rotary drilling. It covers the variables affecting the performance of rock bits, including formation, equipment and personnel, and illustrates the type of bit the company recommends for each type of service.

### Compressor

Schramm, Inc., West Chester, Pa., has issued Bulletin No. 3700-OW describing in detail new Deluxe "Utility" Compressor.

### Combustible Gas Indicator

Mine Safety Appliances Company, Pittsburgh, announces the publication of a new bulletin describing the MSA Combustible Gas Indicator—a self-contained, portable instrument used for testing explosive gas hazards and locating leaking gas. The brochure is complete with photographic illustrations and operating diagram together with examples of how and where the instrument is being used effectively.

### Magnetometric Survey

William M. Barret, Inc., Shreveport, La., have just published a 24-page bulletin dealing with the application of the magnetometric methods to structural problems in petroleum geology.

### Fence

Cyclone Fence Company, Waukegan, Illinois, have published a 32-page book entitled "Your Fence—How to Choose It—How to Use It," profusely illustrated covering most of the possible uses of the company's fence.

### Air Compressors

Novo Engine Company, Lansing, Michigan, is distributing bulletin No. 401 describing in detail its new line of single- and two-stage engine-driven air compressors, Model HC for Diesel and gas engine starting.

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# Squeaks from the Bull Wheel

### A Long One

Little Jenny saw a dachshund. "Oh, mother," she exclaimed, "this is the kind of dog the man on the radio sang about."

"On the radio?"

"Yes—he said, 'Get along little doggie.'"

### In Self Defense

"That blond I was with was sure a scrapper. She slapped me twice."

"Did you finally kiss her?"

"Sure, I saw I would have to or she'd beat me to death."

### Sportsmanship on the Links

"Confound it, sir, you nearly hit my wife."

"Did I? Well, have a shot at mine!"

### Coats of Paint

"How many coats of paint do you give a door?"

"Two, my boy."

"Then if you give it three coats it would be an over coat."

"Yes, my lad, and a waste coat."

### Knees Enough

Fair Plaintiff: "When I get on the witness stand, I suppose that I'll have to bare everything."

Her lawyer: "Oh, no! I think not; it'll be sufficient if you merely cross your legs."

### English as Spoken

A cockney phoned to inquire the fare to Ealing, a suburb of London. The man at the other end of the line couldn't catch the name of the station so in desperation he asked the inquirer to spell it. Quickly came the reply:

"E—for 'Erbert, A—wot the 'orses heat, L—we'ere yer goes w'en yer dies, I—wot yer sees wiv, N—wot lay a hegg, G—Gawd bless me. Get me?"

### Boy Leaves Girl

"Didn't you say once that there was something you liked about me?"

"Yes, but you spent it."

### Sophisticated Willie

"Whose little boy are you?"

"Be yourself. Whose sweet mamma are you?"

### Mental Calculation

Math Prof.: "If there are forty-eight states in the Union, and super-heated steam equals the distance from Bombay to Paris, what is my age?"

"Forty-four, sir."

"Correct, and how did you prove that?"

"Well, I have a brother who is 22 and he is only half nuts."

### So Sorry

During a recent tong war in San Francisco's Chinatown, a neutral member of a non-participating tong was clipped behind the ear with a .45 pellet. At his funeral, later in the week, was delivered a floral piece with the following inscription:

"We wanted Lee Wing
But we winged Willie Wong;
A sad—but excusable—
Slip of the tong!"

### Those Thrifty Scots

A commercial traveler, held up in the Orkneys by a storm, telegraphed to his firm in Aberdeen: "Marooned here by storm. Wire instructions."

The reply came: "Start summer holidays as from yesterday."

### Fixing It

"Willie, what on earth are you pouring glue into the soup for?"

"So Dad can't say, 'Soup again, eh? Why don't we have something that'll stick to my ribs.'"

### Infallible

Wife: "Where can I put this so I won't forget it before I go out?"

Husband: "In front of the mirror."

### Too Quick

Officer: "You've been doing sixty miles an hour. Don't you care anything about the law."

Lady: "Why, officer, how can I tell? I've only just met you."

## Ray McGrew Opens Up

**A Reminiscence, By RAY L. DUDLEY**

Ray McGrew, whose retirement from the Standard Pipe Line Company (Oil Weekly, May 10) was made the occasion of a buffet dinner at the Shreveport Country Club Friday, is an old timer in the oil business who never lost his sense of humor. His humor, of the dry, Will Rogers brand, and the similarity of his appearance to that of the great humorist, caused his friends to kid him about not carrying a rope to the various conventions. Once, on the Broadmoor Golf Course, McGrew, Walter Fondren and the writer spent so much time in sand traps that some of the wags attending an API meeting there suggested that we use the laborer's entrance to the hotel when we finally wound up 18 holes.

A few days later I saw Ray in Houston, in a crowd.

"Coming up to Shreveport soon," asked Ray.

"Hadn't planned to," I replied. "Why?"

"I can't tell you here," answered Ray, "but if you're in Shreveport soon, come and see me. I have a good story I want to give you."

Immediately I had visions of a big inside story on something or other. Ray wasn't ready to release it in Houston, I figured, but within the confines of his office——"

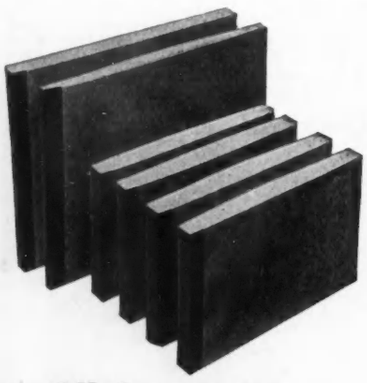
The next night I caught the train for Shreveport. Armed with a sharp pencil, and plenty of note paper I went to Ray's office.

For half an hour we chatted about various things, and then I approached the subject which had brought me to Shreveport, thinking that Ray was losing his nerve in opening up.

"Ray, about that story you told me you would give me when I came up ——" I started.

"Oh, yes," said McGrew. "There was an old negro woman——"

. . . and I found that I had gone all the way to Shreveport to hear his story about the old negro mammy who was washing windows!

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